THE INTERNAL AUDITOR

A PERIODICAL OF
THE INSTITUTE OF INTERNAL AUDITORS, INC.

December 1950

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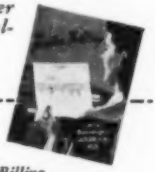

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December 1950

Vol. 7 No. 4

THE INTERNAL AUDITOR

A PERIODICAL OF
THE INSTITUTE OF INTERNAL AUDITORS

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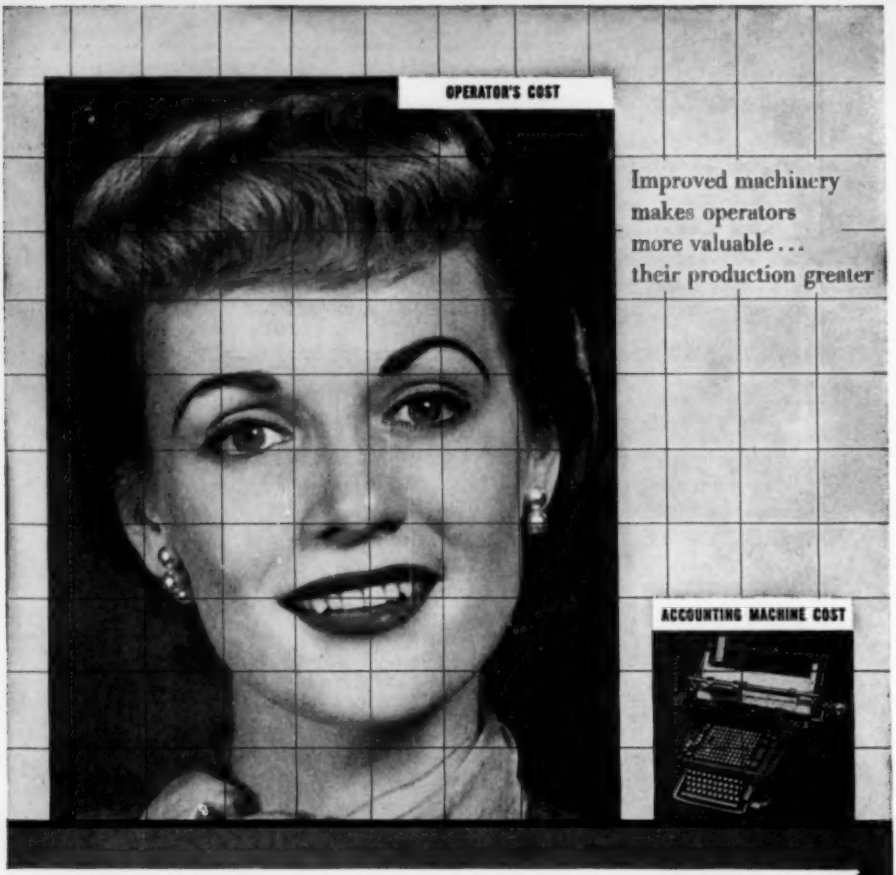

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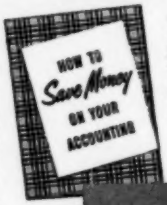

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BIRD'S-EYE VIEW OF THE DECEMBER ARTICLES

REVIEW OF INTERNAL CONTROL

By Curtis T. Atkisson

This paper describes the main features of an internal review program recently undertaken in the Ford Motor Company. It is interesting, concrete and suggestive.

ORGANIZATIONAL OBJECTIVE AND THE INTERNAL AUDITOR

By J. A. Glenn

An excellent and well-balanced argument is presented in this article.

WORK SIMPLIFICATION—A CONSTRUCTIVE TECHNIQUE FOR INTERNAL AUDITORS

By R. L. Ornsby

This paper outlines the principles and application of work simplification; the elimination of the non-essential by finding the one best way to perform work.

WHAT DOES IT COST!

By Frank J. Carr

A timely subject, being more and more discussed, is here presented by a recognized author. It is of interest and of information to all internal auditors.

THE NEED FOR INTERNAL AUDITING AS A PART OF COMPTROLLERSHIP

By W. J. McNeil

This is a first-rate, well-written paper, pointing out the importance of internal auditing from the viewpoint of a Government authority.

HOW TO DEVELOP AND WHAT TO EXPECT FROM A PUNCHED CARD INSTALLATION

By Henry M. Hopkins

Much valuable information is given in this article by an author who is thoroughly familiar with his subject. It will have particular appeal to those INSTITUTE members who attended the Special Class in I.B.M. operations at Endicott, New York, last April.

PERPETUAL INVENTORY CONTROL—A REALITY

By Val Williams

Herein is presented an interesting application of internal auditing. Earle Cunningham highly recommended it as an example of case-history research.

MAINTENANCE OF INTERNAL CONTROLS

By Earle H. Cunningham

This paper, one of many contributed by Mr. Cunningham, constructively summarizes the basic principles of internal control in present-day internal auditing.

THE FAIR LABOR STANDARDS ACT OF 1949—ITS EFFECT ON BUSINESS

By A. B. Hughes

Although the subject discussed in this article is not directly related to internal auditing, it is one about which internal auditors should know in auditing payroll records and procedures.

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THE INTERNAL AUDITOR

A PERIODICAL OF
THE INSTITUTE OF INTERNAL AUDITORS, INC.

CHARLES J. FUE, *Editor*

VOL. 7 DECEMBER, 1950 NO. 4

THE PRESIDENT'S PAGE

MANAGEMENT ACCEPTANCE

OUR special objective for the year is to develop more positively our "management acceptance." Let us start off by considering some of the yardsticks by which we can measure our progress in this direction. These would include: (1) Does management give you special assignments? (2) Does management seek your counsel regarding specific problems? (3) Does management back you up when your recommendations are not accepted or at least fully considered? (4) Does management welcome the visits of your staff representatives? and (5) Are your people sought after for filling other open company jobs which would involve promotions?

Next let us consider the elements of a specific program for attacking the problem of developing management acceptance. One group of these elements includes attention to certain important personal qualities—patience, persistence, conviction without stubbornness, a cooperative attitude without being ingratiating, being constructive, moving with reasonable care and caution—but being willing to make decisions and act when the circumstances warrant it. The group of personal elements includes also attention to dress and appearance and related personal actions.

A second group of elements involve the greater development of management understanding and perspective. Specifically, we must extend our reading, broaden our contacts outside the company, expose ourselves more to operations, and try to put ourselves in management's position for the purpose of thinking through their problems and interests.

We can then direct our internal auditing and related reports more intelligently and exclude details and non-essentials which becloud the really important issues.

A third group of elements involves keeping ourselves alert to new needs which develop out of particular developments—a change in company organization, a fire, a defalcation, or the like. We must avoid the kind of stabilization which is called getting in a rut; instead we must maintain continuously a vigorous and fresh approach.

Finally we must utilize our personal contacts with management—both scheduled and non-scheduled. In these cases we must avoid saying nothing, but, on the other hand, avoid saying too much. Through poise and proper handling of these personal contacts we can create confidence in us on the part of management.

Obtaining management acceptance is one of the most vital ingredients of successful internal auditing. In our individual company situations we propose to attack the problem during this tenth anniversary year. It is hoped that the elements outlined will provide some guide for making the attack on the problem of developing management acceptance.

—Victor Z. Brink.

If a thing is difficult to be accomplished by thyself, do not think that it is impossible for a man: but if anything is possible for a man and conformable to his nature, think that this can be attained by thyself too.

—Marcus Aurelius.

THE NINTH ANNUAL CONFERENCE OF THE INSTITUTE OF INTERNAL AUDITORS, INC.

OCTOBER 22, 23 and 24, 1950

CHALFONTE-HADDON HALL HOTEL

Atlantic City, New Jersey

By MILTON H. KINNEY

THE Ninth Annual Conference became another milestone in the growth of THE INSTITUTE. In attendance were 455 members and guests, who came to Atlantic City from all parts of the United States, Canada, and from abroad.

* * *

THE CONFERENCE THEME — INTERNAL AUDITING IN ACTION

* * *

CONFERENCE PROGRAM

Sunday, October 22

CHAPTER ACTIVITIES MEETING

VICTOR Z. BRINK, presided

The Chapter Activities Meeting was the first formal meeting, and was attended by approximately 100 members. The experiences of the various Chapters in conducting successful meetings through the use of outside speakers, panel discussions, etc., were discussed in detail.

Mr. Brink summed up the meeting very well by stating that programs must be designed to meet the interest of local Chapter members. He also expressed an opinion that the organization and direction of a Chapter offers a real management problem, and a well-run Chapter is a definite indication of good managerial talent on the part of its staff of officers.

* * *

The Chapter Activities Meeting was followed by a Reception at 5:30 p.m.

* * *

Monday, October 23

ANNUAL MEETING

In the Vernon Room—JAMES B. PARKER presided

The reports of various committees were presented.

The report of the Nomination Committee was read; and the following officers were elected:

President —V. Z. BRINK
Ford Motor Company, Dearborn, Michigan

Vice President—H. C. M. COBB
Worthington Pump & Machinery Corporation, N. J.

Secretary —R. M. GARDNER
General Motors Corporation, Dayton, Ohio

Treasurer: —J. R. DONELIK
Prudential Insurance Company of America, N. J.

Mr. Cobb reviewed the results of the Survey on Internal Auditing. While pointing out that the over-all returns have been somewhat disappointing, he stated that the material that had been received and analyzed was of considerable value.

Mr. Parker briefly reviewed the accomplishments of the past year, and urged each Chapter to continue to plan quality programs and to endeavor to increase its membership.

* * *

SPECIAL SESSIONS

Monday, October 23

In the Vernon Room—D. B. MATHIAS presided

The following papers were read and discussed:

Equipping the Internal Auditor for Action ..... *W. J. L. Townsend*
Internal Auditing Is Only 50% Accounting ..... *W. G. Proctor*
Contribution of the Internal Auditor
to the Annual Report ..... *G. G. Crowder*

In the Garden Room—G. T. BODMAN presided

Audit of Construction Costs ..... *W. Hahn*
Control and Valuation of Replacement
Parts Inventory ..... *D. C. Steinhelber*
Survey and Audit of Factory Costs ..... *A. E. Schuricht*

In the Solarium—C. J. GHESQUIERE presided

Audit of Punch Card Accounts Payable System ..... *L. D. Tarlin*
Examination of Sales Offices ..... *R. E. Noonan*
Internal and External Auditors Appreciation
of Each Others Duties and Responsibilities ..... *T. R. Cloake*

* * *

Monday Evening

In the Carolina Room

Probably the outstanding innovation of this Conference was the enjoyable dinner-dance and show presented Monday evening. Excellent music was provided from 7 p.m. until midnight, and the enthusiasm of the group was ample proof of the enjoyment of the affair.

Mr. James B. Parker, retiring president, was presented with a handsome gift in recognition of his leadership during the past year.

* * *

Tuesday, October 24

MEETINGS OF THE INDUSTRY GROUPS

At Various Locations in the Hotel

Eleven industry group meetings were again an outstanding event of the Conference. The discussions were constructive, and there were many expressions of appreciation for the opportunity to exchange ideas with others in similar industries who have the same problems or who may have solved similar problems.

The following speakers discussed subjects relating to a number of the industries represented in THE INSTITUTE:

Aircraft and Automobiles	—	G. F. WEISSGERBER
Chain and Department Stores	—	J. W. WIRTH
Chemicals and Pharmaceuticals	—	R. E. WESTFALL
Foods	—	H. J. WENDT
Heavy Machinery and Equipment	—	M. J. FAHEY
Insurance	—	H. M. HOOVER
Light Machinery and Equipment	—	R. K. ARTHUR
Mining and Metals	—	W. H. LIDDLE
Petroleum	—	F. W. LENNON
Public Utilities	—	G. A. LEE
Trust and Banking Companies	—	J. R. TYTLER

* * *

SPECIAL SESSIONS

In the Vernon Room—V. G. GENDRON presided

Education—Present and Future Internal Auditors .... *W. R. Davies*

Sampling Technique Applied to Internal Auditing ..... *R. P. Aten*

What Has Internal Auditing to Offer Top Management? ..... *A. H. Kent*

In the Garden Room—R. M. GARDNER presided

Audit of Materials and Supplies ..... *A. E. Carpenter*
The Internal Auditor's Role in the Cost Reduction Program ..... *W. T. Hamilton*
The Internal Auditor's Role in Reorganization ..... *R. H. Wood*

In the Solarium—XANDOR LOOS presided

Audit of Royalties ..... *E. F. Ratliff*
Unscheduled Activities Called Internal Auditing .. *H. D. Woodcock*
Getting the Most from Circularization of Customers' Accounts ..... *W. C. Kidd*

* * *

SUMMARY

The Closing Session—In the Vernon Room

In this closing session, Mr. Victor Z. Brink, president-elect, urged all members to continue to emphasize two important factors:

1. Personal development through contacts, exposure to operations, reading, and appearance.
2. Management acceptance through reports, alertness to the needs of management, and personal contacts with management.

* * *

THE CONFFRENCE COMMITTEE

General Chairman	—	HARRY H. WARTHEN
Co-Chairman	—	JERALD S. HANKS
Budget and Finance	—	FRANK M. FISHER
Exhibits	—	STEPHEN A. WALTON
Program	—	JOSEPH A. GLENN
Industries	—	RICHARD A. VANHORN
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REVIEW OF INTERNAL CONTROL*

By CURTIS T. ATKISSON, Manager
ACCOUNTING POLICIES AND SYSTEMS DEPARTMENT,
FORD MOTOR COMPANY

Mr. Atkisson is a graduate of Rollins College in Business Administration. Prior to his joining Ford Motor Company in Dearborn, Michigan, Mr. Atkisson was on the staff of the Treasurer of Florida Power and Light Company, and Chief Accounting Consultant, and later Assistant to the Financial Vice President of Ebasco Services Incorporated.

Mr. Atkisson was President of THE INSTITUTE 1945-1946.

THIS discussion will describe the main features of an internal control review program recently undertaken in the Ford Motor Company. While the program has been designed especially for our own needs, the principles are applicable generally. Although the program has not been quite completed, its reception and results so far have been so satisfactory that I feel safe in presenting the program to you.

The program is not wholly unique, I am sure. However, I believe you will be interested in a high-spot summary of the objectives, the material used and developed, the schedule of meetings outlined, the provisions made for charting of internal control procedures at each local plant, and some experiences to date.

The background and origin of the program will be sketched first so that you may better understand the objectives and the emphasis given to the various aspects of the plans.

Attention to internal control has been and is a continuing matter with my department, Accounting Policies and Systems, and other departments in the central Controller's Office and the Office of the General Auditor. The decentralization of management responsibility that has taken place in the company during the past three years has involved also an extensive program of decentralization of accounting. What was formerly a highly centralized accounting system has become within the past year or two a decentralized accounting system.

Every effort has been made during this process, of taking the accounting system apart and putting it back together again in smaller

*Paper presented at the First Annual Southwest Regional Conference, May, 1950, Dallas, Texas.

pieces, to see that appropriate internal controls were retained or established. With the decentralization process complete, we have undertaken a review to make certain that the procedures established in the various step by step changes leave no gaps in internal control that it is practicable to close. In other words, we have as a current major objective for our department the review of basic accounting control procedures and the publication of any needed revised or new procedures. Here the approach is to determine just what basic control procedures should be prescribed Company-wide.

The particular internal control review program which I am going to describe for you will fit into our long range plans, as you will see. The objective of the internal control review program I will outline is that of immediately alerting all key personnel, operating and sales, for example, as well as accounting, to any possible breakdown or deficiency in the system of internal control which might result in losses to the company. Responsibility for conduct of the program is placed by the divisional controllers with the controllers or executive accountants of each accounting location. The accounting locations consist principally of the accounting offices of about 50 plants and 20 separate parts depots.

One important factor influencing the decision to ask all accounting locations to review internal control as specifically applied in their location is that of two major defalcations in recent months, both of which you may know of through news accounts. One of these, that at the Edgewater Plant, involved the physical aspects of internal control. Quantities of valuable parts and accessories, through collusion among a number of employees and outside parties, were taken from the parts depot located at the plant. In the other case, at the Dearborn Parts Depot, collusion between an employee of the accounts receivable group and outside parties resulted in quantities of parts and accessories being properly cleared through plant gates and then being invoiced at only a fraction of the correct quantity. These cases not only indicated that increased emphasis on internal control is needed throughout the company but also pointed up the responsibility that all supervisory personnel shares in the effective operation of the system of internal control.

Our internal control review program provided, subject to adaptation by the divisional controller or local controller, that the controller hold two meetings with the plant manager and key members of his organization, and two meetings with the key members of the accounting organization. In the case of each group the first meeting was devoted to an explanation of the program and to pointing out the need for inquiry, ideas, and action on the part of each participant. The second meeting, held within 30 days after the first meeting, was in the nature

of a follow-up meeting to determine what had been done and what was yet to be done to correct any internal control weaknesses that might have been brought to light as a result of the studies suggested at the first meeting. The material made available for each location's use included several sets of the following:

Booklet on "Internal Control" published last year by the American Institute of Accountants.

A memorandum entitled "Summary of Protective Aspects of Internal Control."

Suggestions and Sample Agendas for Internal Control Meetings.

A Check List of Internal Control.

A suggested Time Schedule for Meetings, Preparation of Charts, Etc.

Nine charts which set forth representative Ford Motor Company Internal Control Procedures.

After each controller had concluded the meetings at his location, he was requested to prepare charts of his existing internal controls, patterned after the representative charts furnished to him. After review by the divisional controller's staff, two sets of these charts come to Central Office where one is used by the Accounting Policies and Systems Department in its plans for further review of basic control procedures for Company-wide use, and one copy is available for reference in the General Auditor's office.

Having given you this general description of our program, I will now describe more specifically the various materials and steps in the program.

The internal control booklet of the American Institute was included in our set of material principally in order to furnish an authoritative discussion, that at least the controller would review as background, of the whole broad field of internal control. Internal control, used broadly, includes cost control, budgetary control, control through effective and efficient organization, and other such subjects not emphasized in the present review program.

The memorandum entitled "Summary of Protective Aspects of Internal Control" was designed to focus attention on the aspects of internal control that seemed to need greatest emphasis at the plant level. This memorandum discusses briefly what are termed the four planning principles, and a fifth principle, the action principle, of internal control. The four planning principles are:

1. That no person be in complete control of an important part of a business transaction
2. That accounting and operations be separated
3. That proofs and control methods be utilized to the greatest practical extent
4. That responsibility be fixed to as great an extent as possible.

The fifth or action principle was stated as:

5. That supervision make certain that prescribed internal controls are being followed and be alert to possible weaknesses.

The memorandum highlights the general principles, not only for the controller's benefit in planning the survey and the meetings, but also for the benefit of other key people that would review the memorandum.

The fifth principle is really the keynote of the whole program and in the paragraphs under this discussion an attempt is made to interest the key people involved by setting forth a few cases where controls failed to function and where what looked like error proved to be fraud. This material and most of the balance of the material is largely directed toward interesting supervision and showing supervision, particularly plant supervision, that it has an interest in and a responsibility for internal control, for the prevention and detection of fraud.

In the suggestions and sample agendas for internal control meetings with the key men of plant management it is provided that the controller, before developing a specific agenda for his first meeting, is to spend sufficient time in the plant to resurvey the physical aspects of the plant and review the internal controls currently in effect. It was believed that the suggested physical survey, taken with the controller's study of the internal control check list that we will discuss in a moment, generally would provide a number of live subjects for discussion with the key members of plant management. The suggestions for the meeting emphasize the desirability of a free exchange of thinking of the group on their responsibilities for internal control.

Before the close of the first meeting the key members of plant management attending the meeting are put on notice that at the next meeting they are to report on the results of their exploration of internal control weaknesses and their plant of action to strengthen internal controls in their area.

At the second meeting each member in turn is to present his report and after each individual's report, there is a general discussion by all present of their views on the particular findings and action. The objec-

tive here again is to do everything possible to obtain a free exchange of the thinking of the group. Also at this meeting the controller is expected to summarize the agreements that have been reached on further courses of corrective action and to arrange for such follow-up as may be deemed necessary.

The two meetings scheduled to be held by the controller with his key accounting employees are similarly handled, except that there is less emphasis on the physical aspects of control and there is the added feature, and a most important one, that of the review of the representative internal control procedure charts and the preparation of similar charts for their own plant and responsibilities.

The Check List of Internal Control, previously referred to, comprises an eight page questionnaire, devoting groups of about ten questions each to:

General Physical Aspects of the Plant	Parts and Accessories Sales
Storage and Production Areas	Accounts Receivable
Shipping Facilities & Procedures	Cash Receipts
Receiving Facilities & Procedures	Cash Disbursements
Vehicle Sales	Purchases
	Payrolls

The heading on the Check List points out that the list does not purport to be complete and that it is designed as an aid to the controller in applying his own thinking to the internal control problems of his location. Following out this idea, there are several numbered blank spaces at the end of each subject list for filling in additional questions.

The four groups of questions on the physical aspects have been given considerable emphasis. Judging from our limited survey, all our plants have not been fully alert to the need for strict adherence to the technical and common-sense practices covered in these questions. Typical of the questions asked are:

> Are there any openings into the plant as a result of accidents, action of elements, etc., which have not been repaired?
>
> Are unauthorized persons permitted access to the plant area? Once inside the plant area, do they have free access to the plant?
>
> Are employees working in the plant restricted to certain areas? Are areas devoted to parts and accessories operations separated from areas devoted to production operations? How many receiving points exist in the plant? Are all necessary?
>
> Do materials which are received move directly into storage or productive areas or are one or more additional movements required

before they reach storage or productive areas? If additional movements are required, can they be eliminated? If not, are they properly controlled?

How could an employee or group of employees divert materials which have been received? Could employees remove materials from the plant through the receiving points? With or without collusion with outsiders?

What possibilities exist for employees to remove materials from storage or production areas to other less frequented areas?

Are trucks, freight cars, etc., properly inspected before they leave the shipping point?

The questions included in the other groups on sales, receivables, cash receipts, purchases, cash disbursements, and payrolls ask similar questions regarding practices on these records. Verifying the answers to these questions and considering what other questions they should ask themselves should help the key accounting people in each plant in the preparation of procedure charts which will give a valid representation of their practices. This is in addition to the main objective of alerting the key personnel to internal control problems.

I have referred repeatedly to the internal control procedure charts, and as has been indicated these comprise a set of nine charts setting forth representative internal control procedures.

Two of the charts present the physical aspects of a plant, and of a parts depot, respectively. The charts show by legend the location of receiving points and shipping points for different classes of material and state in abbreviated narrative form the receiving and shipping procedures that are important from the viewpoint of internal control.

The importance of charting the physical aspects of plants and depots is well illustrated by the following incident. We found that at the first plant we attempted to chart to use as an example there were 18 points at which material was received into the plant, and the controller had for some time been working on the problem and had closed several receiving points. Naturally we were unable to use this plant for the purpose of charting representative procedures.

Key plant management personnel, particularly plant protection, and production control men, have a vital interest in this phase of the review of internal control. Over a period of time, unless their supervisors show a definite interest, plant guards tend to relax their vigilance. Also, plant supervision may sometimes feel unable to carry out from time to time specific measures for physical control, due to budget or other

reasons. A new look at the whole problem, like that here suggested, may provide a better answer, or at least will bring a recognition of the risks involved.

The other seven charts present in flow-chart fashion the internal control procedures covering vehicle sales, parts and accessories sales, accounts receivable, cash receipts, purchases, cash disbursements, and pay rolls.

In addition to showing the flow of papers between departments, the charts state briefly the important internal control features of the procedure and by a heavy arrow device call attention to particularly important control aspects. Each chart, except the one on purchasing, has been conformed to the actual situation in a particular plant.

One of the advantages in charting procedures is that it often brings out the worst in a procedure, at least that has been our experience on this project and in experiments we have carried on in recnt months in the charting of procedures. In any event, our plan assumes that the first drafts of these charts at the plants will bring out the worst in the plant procedures, and that further discussion and investigation will, at least in some cases, bring about a strengthening of internal control. Undoubtedly some situations will be encountered where no corrective action is feasible. Even here we will have the advantage of having had attention focused on the defect, with the expectation that such internal control as is feasible will thereby tend to be made more effective.

As I have indicated, the last step in this internal control review program involves the review of the set of plant charts by the divisional controllers' staffs, and availability thereafter of a complete set of these charts for reference in my office and that of the General Auditor. For some time to come, until the charts become gradually out of date, the charts will provide us with a ready source of information regarding actual practices in the field and should thus contribute materially to the development of our long range plans for improving the basic control procedures prescribed for use throughout the Company.

May I again emphasize that the principal objective of this particular internal control review or training program is that of alerting all key personnel to any possible breakdown or deficiencies in the system of internal control.

My paper has given you thus far a summary of the objectives, and techniques used, of our internal control review program. You will perhaps be interested in some "proofs of the pudding," some evidence of the results being accomplished by the program. So, I will conclude by

reading some of the notes I made when at a recent meeting of our Procedures Coordination Committee representatives from two of our divisions made a presentation of their experience with the program.

Plant Protection Department has charted every guard station, showing number of guards, examinations being made, number of people and trucks going through daily, etc.—all bringing a "fine job" comment from the accounting representative.

Some charts went back as many as 14 times for correction. Through regular progress reporting, coordination, etc., division staffs kept after internal control review program and got action despite cost studies, budgets, etc.

Purpose—to bring internal control into focus. Everyone is now internal control conscious.

One (over-budget) man will spend next several months on review and correction of internal control.

For example, have recommended that certain fences be moved to make possible a reduction in plant protection forces.

Have recommended separation of shipping and receiving areas that have been adjacent.

All of charts have been reveiewed by Plant Managers and latter are very much interested.

Division is requiring each plant to keep its own charts up to date, and to re-run periodically, probably on a quarterly basis.

It should be mentioned also that from the Central Office standpoint, we have been getting some very good information from the internal control procedure charts. The charts are proving to be of real assistance in our studies of basic control procedures.

QUOTABLE QUOTE

Give us clear vision that we may know where to stand and what to stand for, because unless we stand for something, we shall fall for anything.

—Peter Marshall.

ORGANIZATIONAL OBJECTIVE AND THE INTERNAL AUDITOR*

By J. A. GLENN, Assistant Manager
DISBURSEMENTS DIVISION, E. I. du PONT de NEMOURS & COMPANY

MR. GLENN is a native of Wilmington, Delaware, and was graduated from the Evening School of Accounts and Finance, University of Pennsylvania. He was associated with E. I. du Pont de Nemours & Company from 1928 to 1941, serving as Accountant, Traveling Auditor and Special Assistant to the Auditor. From 1941 to 1944 he was Chief Auditor of Remington Arms Company, Inc. Subsequently he became Assistant Auditor of de Nemours, assuming his present position in the early part of 1950.

IN recent years, largely as the result of its improved quality and more constructive character, internal auditing has been referred to as an "aid to management."

Let's inquire into this device called management in order to trace more precisely our true position on the management team and evaluate the quality of our audit service.

We know that management's job is to achieve the objectives of the enterprise. Those objectives may be simply stated as the production and sale of goods and services at a profit, and the development of new and better products that will improve our living standards.

ORGANIZATION FOR MANAGEMENT

How is management organized to achieve these objectives? I shall select du Pont for the purpose of a brief illustration.

At the top there is, of course, the Board of Directors, elected by the stockholders. About a third of these directors are full-time executives of the Company. It is an active board and meets every month.

From the Board membership appointments are made to four committees; the Executive Committee, the Finance Committee, the Bonus & Salary Committee, and the Committee on Audit. The duties and responsibilities of the latter two Committees are apparent from their titles.

*Presented at the 2nd Anniversary Meeting of the Niagara Frontier Chapter, May, 1950, Buffalo, N. Y.

The Executive Committee, composed of the President as Chairman and eight Vice Presidents, is responsible for the day-to-day top management and direction of the Company's affairs. The members of this Committee are executive officers of the Company.

The nine-member Finance Committee passes judgement upon major expenditures and keeps close watch on the Company's financial situation.

There are ten Industrial Departments, each headed by a general manager who is provided with his own production, technical and sales organizations. The general managers are responsible for the activities of their departments and for the Company's investment in all plants, laboratories, processes and other facilities under their jurisdiction. These general managers report to the President and Executive Committee. In addition, thirteen auxiliary departments, whose heads also report to the President and to the Executive Committee, supplement and aid the industrial department general managers in their efforts to accomplish the job of integrating the forces, human and material, that produce the end result, i.e., the production and sale of goods at a profit and the development of new and better products. These auxiliary departments, comprising groups of highly trained specialists, provide special services and talents in advertising, employee relations, engineering, legal, public relations, purchasing, research, traffic and other service activities.

THE TREASURER'S FUNCTIONS

The Treasurer, too, is an executive officer of the Company. He is elected by the Board of Directors, and reports to the President and to the Finance Committee. Among other responsibilities, the By-Laws state that the Treasurer is "the principal officer in charge of the accounts and the Accounting Department of the Company." Obviously, it is essential that he, too, be equipped with the necessary instruments to enable him to effectively carry out his important responsibilities.

These instruments or aids, of course, comprise his staff, his principal assistant plus the Comptroller, two Assistant Treasurers in charge of banking, financial analysis and special studies, a Credit Manager, the Manager of Disbursements, a Personnel Manager and the Auditor.

As "principal officer in charge of the accounts," the Treasurer must, if he is effectively to carry out his commission, go into all departments of the Company — head office, plants, sales offices and stores — and ascertain the validity of the accounts in each department, the adequacy of internal check and control, and the appropriate safeguarding of the assets. Obviously the internal auditing department is the mobile

and versatile instrument that must carry out this essential appraisal activity for the Treasurer.

THE INTERNAL AUDITING DEPARTMENT'S PLACE ON THE MANAGEMENT TEAM

Here, then, is the internal auditor's place on the team—and what a unique position it is! As emissary of the Treasurer, he (the internal auditor) must of necessity have access to all transactions of all branches of the Company; ten industrial departments and thirteen auxiliary departments. What other departmental unit enjoys such a privilege? That privilege, of course, is inseparably bound to a correspondingly important responsibility, the responsibility to furnish internal audit service that is consistent with the highest standards of the profession and one that keeps pace with the Company's development.

To obtain this service management provides the dollars necessary to maintain a capably directed, well-qualified, numerically sufficient staff, using advanced techniques to conduct selective audits. Staff quality and advanced techniques, the human element and the technical element, complement each other; both must be present.

THE HUMAN FACTOR

The importance of the human element cannot be over-emphasized. We know from experience that an audit is no better than the competence of the auditor who performs the work. On the other hand, we know that the value to management of the audit report depends upon the excellence of the Supervisor who reviews the work and edits the report. The first need, therefore, in achieving low-cost, high-quality audits, is a thoroughly competent, well-balanced staff.

A direct approach to control of staff-quality is through the use of rating charts. Different ratings for each individual are carefully compared and appraised by the Chief Auditor for the purpose of effecting those changes necessary to strengthen the staff.

Having combed our staff, how do we preserve this newly acquired staff-quality? By having supervisors prepare periodical Personnel Rating Reports covering every auditor under their supervision. Such periodic and comprehensive, recorded appraisals should be followed by personal interviews by the Supervisor, who should give due recognition to individual achievement and progress or point out any prevailing weaknesses that require correction. At the same time, appropriate opportunity is also afforded the staff member to voice freely his hopes and fears and, of course, express directly his views with respect to his Supervisor's comments and criticisms. Such periodic personnel ratings and

interviews tend to force the Supervisor to discharge his supervisory responsibilities in the best interest of both the Company and the employee.

Preservation of personnel quality presupposes a program of rewarding competence, encouraging confidence and combating complacency. This formal program, however, is frequently surpassed by the success that "quality" itself normally and naturally begets. If an Auditing Department renders top quality service, the Department and its personnel will be respected. Department Managers who highly regard the departmental staff standards will tap, for positions of higher responsibility, the reservoir of competent auditors. Transfers of capable men to other departments and positions of higher responsibility are not only appropriate reward for good work, but also a constant incentive to the staff men; and incentive of this character is very important to the maintenance of good morale. Moreover, siphoning from the top prevents staff decay, combats complacency and produces renewed vitality.

THE TECHNICAL FACTOR

The second factor of auditing quality, the technical element, is equally indispensable.

For the most part, the technical tools comprise:

A. The Audit Manual
B. The Selective Auditing Program
C. Working Papers
D. The Audit Report

Careful design of these tools is not only important to the quality of work but also to its cost. To illustrate: in our case, establishment of a resident system for accomplishing branch audits plus selective auditing, elimination of system descriptions in working papers, utilization of standard working papers, use of brief audit reports, and improved quality of personnel has produced a 36% man-power saving and a dollar saving of over $150,000 per year.

(A)—The Audit Manual

A comprehensive and up-to-date audit manual, properly indexed, should be given to each auditor. It should be tailor-made to fit the company's needs. We have found it appropriate to treat each audit subject as to: (1) Description of System; (2) Division of Responsibility; and (3) Audit Procedure.

Part (1)—"Description of System" acquaints the auditor with the origin and nature of the transactions, and Company or depart-

mental policies and procedures applicable thereto; also, the forms utilized, the usual flow of papers, and other pertinent details that convey general knowledge of the nature and conduct of the transactions. Such knowledge is designed to obviate unnecessary questions and expedite the auditor's work.

Part (2)—"Division of Responsibility" points out duties and responsibilities in relation to good internal control.

Part (3)—"Audit Procedure" conveys the approach to the audit and sets forth the minimum scope. It is impressed upon all staff members that the Standard Practice Manual merely points out the minimum amount of auditing and testing necessary under normal conditions. They are held responsible for recognizing the need for more extensive testing and sampling as indicated by the circumstances.

(B)—Selective Auditing

How much auditing should be done? Where? How? Obviously, primary consideration and thought should be given to the degree of auditing that constitutes appropriate discharge of our full audit responsibility. In addition to comprehending our Company's exposure to loss due to fraud, negligence, waste, major errors, and inadequate internal check and control, the preventive and protective phases of our responsibility, we must also, if we are to accomplish our broader scope, keep abreast of our Company's development and perform those constructive appraisals and investigations, the need for which is dictated by observation, tests, experience, and judgment. Due regard should, of course, be given to the scope of examination performed by the public accountant so that the internal audit coverage appropriately complements but does not unnecessarily duplicate their work. With maximum effectiveness, we can then allocate the required audit effort, qualitatively and quantitatively.

How, for the purpose of effectively allocating audit effort, can we measure a company's exposure to loss? Available practical yardsticks are:

1. Nature of assets; value and turnover
2. Dollar income and dollar expenditure
3. Division of responsibility and internal control
4. Pertinent historical audit findings—or audit ratings

After considering and weighing our Company's exposure, we adopted the following approach:

Larger plants are rated A, B or C as merited by historical audit results applicable to each point. Major subjects, that is, cash, payrolls, purchasing, shipping, invoicing and inventories at locations rated A or B are audited each year; other subjects at the larger plants rated A and B are audited on a two or three-year cycle depending again upon dollar income or expenditure involved. All subjects are audited annually at large plants with C ratings, that is, those plants where recent audits have disclosed abnormal inventory shortages, defective internal control, or unsatisfactory performance with respect to any of the major transactions.

Where our historical audits of warehouses and small plants reveal satisfactory conditions, audits are made on a two-year cycle. Selected sales offices are also audited bi-annually. Of course, supplementary controls exercised by the District Sales Offices and the Home Office Control Divisions are contributing considerations to audit frequency. Where abnormal stock shortages are disclosed, these locations are audited annually until the unsatisfactory conditions are corrected. Also, the larger sales offices, particularly those with heavy invoicing responsibilities, are audited annually.

Consigned stocks in excess of $50,000 are inventoried annually. Consigned stocks $25,000 to $50,000 are inventoried bi-annually. Those under $25,000 for the most part are inventoried every three years, pertinent considerations again being control exercised by the Home Office Control Division over stock limits, monthly consignment reports and general reputation and credit condition of consignment agents.

To illustrate selectivity, we have scheduled for 1950 audit 63% of our total facilities, i.e., plants, warehouses, retail stores, consigned stocks, sales offices, construction projects, etc. However, our 1950 audit coverage will include supervision of physical inventories approximating 91% of the total working capital inventory investment, which bears out my earlier comment that our selective sampling gives appropriate weight to dollar magnitude of exposures.

Construction expenditures, on the other hand, are representative of transactions that require audit more frequently than once a year. The magnitude of the funds disbursed, the speed with which they are spent and their particular susceptibility to loss, due both to functional weaknesses (negligence, major error, waste) and exposure to fraud, demand prompt, frequent and comprehensive audit service. Vulnerability stems from the large volume and dollar-value of purchase commitments, including numerous and varied cost-plus and unit price contracts, oftentimes negotiated under pressure of the emergency and in-

effectively controlled and checked by temporary field and office staff. For this reason, frequency of audit visitation and scope of work must be fitted to the stage of the construction project. Usually, three or four visits to the project-site within a year are desirable. In order to assure proper control at the outset, the initial visit to the project should be made just as soon as construction work is started.

This selective audit technique permits us to expend our audit time with maximum efficiency. Coverage is sufficiently broad to embrace all activities of the Company, with appropriate weight being given to the dollar value of the transactions involved, the risk nature of such transactions, the prevailing system of internal check, and the historical audit results.

(C)—Working Papers

Here is a fertile field for improvement of audit quality and, too, for cost reductions. Standard Working Papers, again tailor-made to fit the company's needs will:

1. Force the auditor to cover the ground necessary for comprehensive audit of the subject.
2. Save him considerable writing time normally expended in setting down description of system and other details.

Standard Working Papers developed from our collective experience, field-tested and periodically revised, provide comprehensive audit coverage of the particular subject with a minimum of writing on the part of the auditor. Furthermore, the printed work sheets are more easily read; they are of uniform size, and facilitate both supervisory review and the ultimate writing of the reports. Forms cannot, of course, entirely supplant the need of narrative presentation of disclosures.

(D)—The Audit Report

Reports covering our larger plant audits used to be 60 to 70 pages long. Description of systems, account reconciliations, and comments relative to insignificant clerical errors were responsible for such lengthy compilations. Now, reports covering our large plants are rarely over two or three pages long, and their content falls into four classifications:

(a) General Scope

(b) Inventories

(c) Major deficiencies

(d) Recommended corrective measures

Each report is challenged and must meet a test of factual correctness, clarity, sequence, tact, and brevity imposed by the Zone Leaders and the Report Editors. Our object is that the reader's reaction to the report should be that a qualified auditor has performed a valuable service in an efficient manner.

MEASURING QUALITY OF SERVICE

These, then, are some of the human and technical "tools" which must be kept sharp to assure high-quality economical auditing service and an important place on the management team.

A practical yardstick for appraising the quality of an Auditing Department's service is based on the opinions of management at various levels in the departments audited. Are they impressed with the caliber of men assigned to their plants and offices? Are they pleased with their judgment as to what is important? Are they impressed with the character of their recommendations? Do they have confidence in the department to the extent that they constantly solicit its counsel? Do they regard those entrusted with the administration of internal auditing as possessing the judgment, fairness, and integrity that they should have?

The survival of the fittest is the ageless law of nature, but the fittest are rarely the strong. The fittest are those endowed with the qualifications for adaptation, the ability to accept the inevitable and conform to the unavoidable, to harmonize with existing or changing conditions.

—Dane E. Smalley.

WORK SIMPLIFICATION— A CONSTRUCTIVE TECHNIQUE FOR INTERNAL AUDITORS*

By R. L. ORNSBY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

MR. ORNSBY attended Fenn College and majored in accounting. He became associated with The Cleveland Electric Illuminating Company fifteen years ago as a part-time employee in the Street Lighting Department, and subsequently, worked in the Credit and Collection and General Accounting Departments. Later, he was transferred to the Methods Department, and in 1949 assumed the position of Chief Methods Accountant. Mr. Ornsby is a member of the National Office Management Association and of THE INSTITUTE.

I AM of the opinion that there is much in common in the work of the Methods Analyst and the Internal Auditor. I'd like to illustrate that by referring to a statement of the Responsibilities of the Internal Auditor, prepared by the Research Committee and approved by the Board of Directors of THE INSTITUTE OF INTERNAL AUDITORS, INC., July 15, 1947.

The Statement explains in part that the overall objective of internal auditing has two major phases. The first is "the protection of the interests of the organization, including the pointing out of existing deficiencies to provide a basis for appropriate corrective action." This involves, primarily, the verification phase of internal auditing—ascertaining the degree of reliability and accuracy of accounting and statistical data, and the effectiveness of internal control. The Methods Analyst is also charged with such a responsibility, particularly in the design and development of accounting systems and procedures and in evaluating the overall effectiveness of management controls.

The second phase of internal auditing as outlined in the Statement is "the furtherance of the interests of the organization, including the recommendation of changes for the improvement of the various phases of the operations. The attainment of this objective involves such activities of the Internal Auditor as:

*Presented at a meeting of the Cleveland Chapter.

a. Reviewing and appraising the policies and plans of the organization in the light of the related data and other evidence.

b. Reviewing and appraising the internal records and procedures of the organization in terms of their adequacy and effectiveness.

c. Reviewing and appraising performance under the policies, plans and procedures."

This supplements verification, and takes in the investigative and appraisal work which should be considered the primary objective of any audit program—the objective desired by progressive managements. The investigation and evaluation of existing organization, policies, work routines, costs, and other factors affecting operations are also the major objectives of methods work. It goes without saying, that recommendations for possible improvements must follow.

If such a similarity in responsibilities exists between methods and internal auditing functions, it is only logical that the two groups should be able to effectively apply the same techniques, particularly with respect to the investigative and appraisal phases of the work. It is here that the principles of Work Simplification may be used to mutual advantage.

What is meant by Work Simplification? The term is often loosely used and many people have as many different conceptions of its meaning. It should be specifically stated that Work Simplification has no relation to working faster and harder. It is merely intended to eliminate *non-essential* work by finding the one best way to do work. It has been defined as "an organized, critical review and inspection of clerical operations with the aim of eliminating all non-essential work and improving the manner in which all essential work is performed." This implies cutting red tape, knocking off the gingerbread, getting down to bare essentials in terms of man power, materials, and equipment required to do a *necessary* job. I emphasize the word "necessary."

To apply the principles of Work Simplification requires an attitude in which there is no room for complacency or self-satisfaction with present conditions. Furthermore, there is no room for self-importance—building up a work volume or a work force merely to attain status. Work Simplification is founded on a philosophy—an attitude—which is "cost consciousness." The prime objective of Work Simplification is cost reduction.

At present, in every office, untold work needs to be done to improve procedures, to effect a logical division of labor, to streamline work flow.

The internal auditor through first-hand observation of conditions and through personal contact with people on the job is in an excellent position to appraise operations. The application of Work Simplification techniques provides a scientific approach and a sound basis for developing, accumulating, evaluating, and presenting facts to top management, including recommendations for improvements.

In general, in evaluating a given routine or operation, it is essential to obtain the answer to three questions:

1. What is being done and by whom?
2. How is the work performed?
3. How much is being done?

The answers to these questions can be found through the use of three tools:

1. A Work Distribution Chart—a device for analyzing the division of labor.
2. A Process Chart—a device for analyzing the flow of work.
3. Work Count—a technique for interpreting the facts about the volume of work in terms of the bearing on the method used.

Before you can analyze the work of any unit of a company, you must be able to see clearly in one place all the activities of that unit and the contribution of each employee to each activity. A Work Distribution Chart is the easiest way to arrange these facts in simple form.

To prepare a Work Distribution Chart requires three steps:

1. *Preparation of a Task List*
   The Task List sets forth the number of tasks performed by each employee and the time devoted to each task. The List should be checked with the employee and his supervisor to assure accuracy.
2. *Preparation of an Activity List*
   This is a statement of the major functions of the unit under review. It need not be detailed. It should answer the question: "What are the general activities performed by the unit?"
3. *Preparation of the Work Distribution Chart*
   This is a recapitulation of the Task and Activity Lists. Columnar working papers can be used to prepare this Chart. Activities are listed in order of importance in the first column. Columns are provided for names of employees and man-hours across the top. Tasks for each employee are entered in the proper spaces.

The basic questions which should arise from preparing the Chart are:

1. What activities take the most time?
   Normally, the largest time should be spent on what is considered to be the unit's major activity. Other totals should reflect the relative importance of the activities. If they do not, find out why.

2. Is there any misdirected effort?
   Too much time on relatively unimportant or unnecessary tasks usually means misdirected effort. The amount may appear small—an hour here or a couple hours there—but frequently it adds up to many hours per week.

3. Are skills properly used?
   It's wasteful to have employees working below or above their ability. Higher paid employees should not be assigned jobs that lower paid employees can perform.

4. Are employees doing too many unrelated tasks?
   Tasks which are very different mean waste motion, unnecessary fatigue, and lost man power. "Jacks-of-all-trades" generally work themselves to death, but fail to make a dent in the work piling up in front of them.

5. Are tasks spread too thinly?
   Too many employees should not be doing the same job. It precludes full use of man power and is conducive to idle time and buck-passing. Overspecialization can be a problem here.

6. Is work distributed evenly?
   Balance must be retained between importance and urgency of work. Willing workers are often overloaded. On the other hand, too little work will hurt morale.

The Work Distribution Chart will give you clues as to possible improvements and will lead to the use of the next tool: the Process Chart.

The Process Chart shows how each activity is carried out, step by step. It puts down in writing the details of operations so that they can be clearly and intelligently analyzed and studied.

In the preparation of the Process Chart, symbols are used to indicate the four elements inherent in any routine:

1. *Operations*—depicted by a large circle to indicate when something is changed, created, or added. It also indicates telephone calls, interviews, etc.
2. *Transportation*—a small circle is used to show movement from one work location to another.
3. *Storage*—a triangle is used to show delays in processing, filing, or ultimate destruction of a form.
4. *Inspection*—a square is used when something is checked, audited, or verified but not changed.

Use of these symbols provides a shorthand method of visualizing operations.

To prepare a Process Chart, it is necessary to (1) decide on the activity to be charted—then stick to it; (2) determine the starting and ending points; (3) number and describe each step even though it may be minor; (4) enter distance for transportation and time for storage; (5) summarize number of operations, times, and distances.

When the Chart is completed, you are in a position to evaluate each step—to ask the $64 question: What? Why? Where? When? Who? and How?

1. *What* is the desired result? Is the objective being achieved or must subsequent work be performed to obtain the result? By asking "what," the purpose of the step is established.
2. *Why* is this step necessary? Does it serve any practical purpose? Does it actually contribute to the final result? What would result if this step were eliminated entirely or combined with another? "Why" questions prove necessity for operations and are perhaps the most important questions to be asked.
3. *Where* should this step be done? Can it be done more easily, with less time or transportation, by changing the location of employees or equipment? Is this work the responsibility of another department? By asking "where," responsibilities and layout of work areas are established, and delays are minimized.
4. *When* should this step be done? Is the sequence proper? Can the work be simplified by combining this step with a preceding or subsequent operation? Can the work be done later thereby permitting more important work to be expedited? The "when" questions establish a logical flow of work and reduce handling.

5. *Who* should do this job? Is the best qualified person handling it? Should the person now doing the work be involved at all? Asking "who," fixes responsibilities and provides for proper work distribution.
6. *How* is the job being done? Is the best method being used? Are forms and equipment proper for the job? Are motions being used to best advantage? The "how" question leads to the elimination of unnecessary and duplicating work, forms, and reports.

The Process Chart furnishes a step-by-step narrative of a process or activity and shows the sequence of work. Before final improvements can be developed, however, it is necessary to have the picture with respect to how much work is being done, since this will have a definite bearing on the method selected. The third tool of Work Simplification—the Work Count—is now brought into play.

Any office activity or process has certain key points or steps. If applied at these points, improvements will pay the biggest dividends. The Process Chart will identify some of these by showing up places where work piles up awaiting action. It also marks the places where the work flow branches. Facts about volume passing these points enable you to see how important they really are and help decide when "how much" is the source of trouble.

Here are some of the things to count: postings; inquiries; interviews; letters; phone calls; checks, vouchers, and other forms; and operations which occur with regularity.

Here are some ways to count: tally; use of existing production reports, recording meters, veeder counters, scales, rulers, and serially numbered forms; stacking; actual count; and time study.

In improving operations, the Work Count helps to:

1. *Schedule work*: It eliminates guesswork in scheduling and permits adjustment of work assignments to fit actual conditions.
2. *Relate tasks*: It permits reorganization of work. Related duties can be combined in new, more productive jobs.
3. *Measure value of a step*: Sometimes equal time and man power are spent on relatively unimportant steps which produce few results. A work count will help determine whether a step is worth-while—a double review procedure, for example.
4. *Spot bottlenecks*: A work count will bring to light points at which back-logs are piling up. Once these are spotted adjustments can be made.

5. *Stimulate interest and production*: Employees are interested in knowing what is expected of them and where they stand. Giving them this information will stimulate interest in their work and will increase production.

These, then, are the tools of Work Simplification: the Work Distribution Chart, the Process Chart, and the Work Count. Remember, they are like a three-legged stool. You must complete all three legs before you have a finished product. You can't take action until you have the *full* story. Study these three tools, translate your hunches regarding improvements into facts, submit your proposal, and reap the benefits.

These techniques are not a panacea, but they will go a long way in assisting you in your investigative and appraisal work.

If members are interested in obtaining further information on this subject, I would recommend that you obtain a copy of the booklet *Work Simplification*, Publication No. 91, on which this presentation has been based. The booklet is available from the Public Administration Service, 1313 East 60th Street, Chicago 37, Illinois.

THOUGHT LEADERS THINK ALIKE

In a National Chamber news release dated August 2, President Otto A. Seyferth says:

"When government asks of its people that they make sacrifices, the people have a right to demand of the government that it, in turn, likewise, take up some notches in its belt."

In an article in the *New York Times* Magazine dated August 13, Prof. Sumner Slichter of Harvard University says:

"The government is asking people to refrain from unnecessary spending. It should practice what it preaches."

WHAT DOES IT COST!*

By FRANK J. CARR

CONTROLLER, MALLINCKRODT CHEMICAL WORKS,

ST. LOUIS, MISSOURI

MR. CARR holds degrees of B.S. in Economics and Master of Arts from the University of Pennsylvania. He joined Mallinckrodt Chemical Works in 1946 as Controller. He was the first Controller of the Tennessee Valley Authority, and has also served as Vice-President in Charge of Finance at the American Steel & Wire Co. in Cleveland. During the second World War, he was on the staff of Sanderson & Porter, Engineers, in New York, his principal assignment being that of business consultant to the Radiation Laboratory at Massachusetts Institute of Technology, the center of Radar Research. He is one of the founders and the first National President of the Controllers Institute of America. He is also a member of the Cosmos Club in Washington, D.C., to which he was elected for distinguished service in the field of accounting.

WHAT does it cost? As accountants, we probably hear that question more frequently than any other. What is our answer? What *is* cost anyway?

If you are a hardware dealer who buys gadgets at $14.40 a gross, it doesn't take much arithmetic to figure that gadgets cost 10¢ apiece. Or perhaps you refine your accounting a little and add $1.44 express charges to figure a "landed" cost of 11¢ apiece. But how about the fellow that made the gadget? what is his cost? He bought material. He used machines. They were run by power. He kept his machine in working order. He employed labor. He supervised the job. He used up supplies. It takes a lot of arithmetic to answer his "What does it cost?" question.

Even in the case of the gadget dealer there may be questions about the validity of his costs. Some accountants will argue that receiving and storage expenses are also a part of cost. But let's not go into that here. Let's confine our discussion to the manufacturer who made the gadget. He has some real problems.

There are two terms that will be important to our discussion, and first I want to explore them for a moment. These terms are cost and expense. A manufacturer spends money for many things. Over the years accounting techniques have been developed so that each expendi-

*Presented at a meeting of the St. Louis Chapter.

ture is charged to a particular account. From these accounts reports are prepared to show what is known as cost, and eventually to show whether there was a profit or loss in the operation. These reports are surrounded by a halo of tradition.

One of the most deep-seated of these traditions is the distinction between cost and expenses. We have come to accept costs as including material, direct labor and factory burden, the latter usually allocated to individual products on some "generally accepted" formula. Expenses include everything else, selling, administration, and perhaps research.

The question I want to raise here is this: What is so sacred about this particular cut-off between costs and expenses? Your answer probably will be that the former are incurred in the factory, the latter in the office; or perhaps that the first covers the cost of production and the second covers the expense of distribution. Of course, administration really sits in the middle and relates to both of them, but for convenience and because of the difficulty of developing a logical distribution formula, it is usually considered an expense rather than a cost.

If we forget this back door that separates the office from the factory and consider the *nature of the expense*, perhaps this traditional cut-off is not so logical after all. You will see what I mean as I proceed.

It is axiomatic that no one cost will serve all purposes. Inventory valuation and profit determination may involve one treatment. Setting of sales prices may involve quite a different approach. Here we may need a range of costs all the way from "out-of-pocket" to "all-in" costs—the latter including even a statistical allocation of administrative and selling expenses. Some will argue that conversion costs are the significant item in sales price fixing. Of course, the last line of retreat by the Sales Department is that competition sets the price and cost has nothing to do with it—or if you have an exclusive product with no competition, you charge what traffic will bear and again cost is only incidental.

Insurance may require still another cost computation, and control of costs may be more effective with some sort of expense analysis or budgetary approach in addition to the follow-up of unit cost trends.

Cost determination is also quite a different problem in different kinds of manufacturing. A few illustrations will show what I mean.

Some years ago a very capable young man applied to me for a job in the accounting department. He already had a good job and I was naturally curious about his reason for wanting to change. Much to my surprise his reason was that he had no problems, and he wanted a job

where he could use his education, experience, and imagination, in the solution of new problems. It developed that his company made one product, in one size, packaged in only one way. They developed unit cost by adding up all their expenses and dividing by the units produced. It was just too easy—and this probably illustrates factory cost determination in its simplest form.

At another time, I had the opportunity to visit a plant in Canada, which also made one product but in a variety of sizes, varying in width, thickness and length. It was all made on the same automatic machine and usually one size represented a substantial run on the machine. After careful study, they determined that the cost of a particular size, for all practical purposes, was determined by the time of the run through the machine. Hence, their cost method was to accumulate all costs of operating the machine, including material, labor and all indirect expenses and reducing it to cost per hour. Multiplying the hours run on a size by the hourly rate gave the total cost of the job, and dividing by the units produced gave the unit cost. Here again is a rather simple but quite adequate cost scheme.

Another degree of complexity is illustrated by a company making automobile parts in large quantities on automatic machines. Here our familiar cost accounting techniques are rather generally applicable. Each part is produced in sufficient quantity so that accurate factors can be established, usually through industrial engineering studies. Material usage, yields, scrap and spoilage, production per man-hour, or machine-hour, can all be determined with a high degree of accuracy. Traditionally, automobile companies place their orders for a model run, so that the parts supplier knows his rate of operation well in advance; and burden forecasts or standards can be set with confidence that the actual will be close to the forecast. Departments or cost centers can be clearly defined. All of the elements that delight the heart of a cost accountant are present and the results of his cost accounting system can be highly satisfactory.

Now let us take you behind the scenes in a chemical plant. Some operations may involve single products produced in more or less automatic equipment in large quantities, and costs can be determined by usual methods with reasonably satisfactory results. In some operations, by-products rise to haunt you with all of their special problems. Sometimes a condition exists that almost defies analysis. This is illustrated by a situation where many products are being made at the same time, in relatively small quantities, using the same equipment, all within the confines of a single department, with a small labor force. Any of the

operators may work at various times on any product or any piece of equipment. While one product is "working," requiring only casual attention, another may be in various stages of preparation.

Perhaps you will understand this more clearly through the homely analogy of preparing a meal in the kitchen. The cook prepares a roast and some potatoes and puts them together in the oven to cook. While they are cooking, he prepares a pie which goes into the oven after the meat comes out, while the oven is still hot, so it requires no heat-up time. He occasionally looks into the oven to check the progress of cooking, but meanwhile he has time to mix a salad. Somewhere along the line, he puts some peas on top of the stove to cook, stirring them occasionally, and plugs in the electric percolator to make the coffee.

Can you picture the cost problems involved in such an operation? It would not take too much imagination to find the cost of cooking the meal as a whole, but how about the labor cost for the roast beef? Or what is the cooking cost of the potatoes that are right in the oven with the roast?

That is the kind of problem we encounter in some chemical operations. The operators themselves cannot give you an accurate time distribution, so even direct labor costs are very much a guess, and any attempt to allocate indirect expenses is even more uncertain.

So we have a great variety of conditions under which we are asked "What Does it Cost?" Some are reasonably simple, others very complex. In some you can be reasonably sure of your answer, in others you must admit that the answer contains some doubt. About the best you can do is to establish a formula and report that according to that formula, this is the cost.

The real problem, of course, is the distribution of burden or factory indirect expenses. Material costs can be determined with reasonable exactness in almost any situation. Yields and scrap losses may present a problem, and sometimes excessive losses may occur for a period; but by-and-large, these factors can be determined by statistical analysis of historical records or by industrial engineering studies. Similarly, direct labor is usually subject to reasonably accurate determination. My cook may have to do some fancy guessing, but this is an unusual situation, and some estimate will probably give a practical answer. At least both of these costs—material and direct labor—will probably vary in accordance with volume of production and can be controlled in relation to that volume. I will have more to say about this.

Burden is something else. It has long been recognized that burden is not an item that can be exactly measured for any particular product. Perhaps if you wanted to spend enough money to accumulate the necessary records, a method could be devised to charge every item of indirect expense to a product. To illustrate; take the example of intra-plant hauling. Some hauls are long, some are short, Some loads are heavy, some are light. Some loads carry a single material, some carry many items. You can visualize a record for every trip showing the length of the haul, the weight of the load, and the items carried and, from this, analysis could be prepared of the cost of hauling each item. But I doubt if the results would justify the cost of the record. That is certainly true in a factory where many products are made in greatly varying quantities.

To get around this difficulty, cost accounting techniques have been devised, and refined over the years, that serve to allocate these burden expenses to products. These have become our generally accepted practices. They give at least consistent results from period to period within a single company, and thus properly indicate trends. To the extent that competing companies use the same burden distribution methods, they would be pricing on the basis of comparable costs. But if one company uses one method—say allocation on the broad basis of direct labor dollars—while another uses another method—perhaps machine hours by production centers—their unit costs for particular products could be substantially different. Then what happens? Jones says product A costs a dollar, and product B costs 2 dollars, so he can sell A for $1.50 but wants 3 dollars for B. Smith finds that A costs 2 dollars but B only 1 dollar, so he is willing to sell B for $1.50 but he thinks Jones is losing money by Selling A for that price. Thus, competition sets $1.50 as the selling price for both products, and Smith and Jones both think they lose money on one item, but, in each case, it is a different item. Even though their combined costs for both items might be identical, their cost accounting methods indicate quite different costs for the individual products. The example is exaggerated, and in practice, the differences would probably never be as great; but it is purposely stated this way to emphasize the point. When you amplify this to include a dozen competitors each with a thousand products, the total effect could be tremendous. Each competitor would tend to set the selling price on the products that his own records indicated to be the lowest in cost, and the overall result might be a tendency to under-price all along the line.

In recent years, there has been an accelerating trend toward the adoption of standard costs. Here we run into another problem due to the necessity of forecasting both burden dollars and production rate for

a future period for which standards are set. In many companies, the rate of production is the more uncertain item of the two to predict. Consequently, as we proceed through the accounting period, we have over or under absorbed burden which may run into substantial amounts. This produces another factor affecting cost data for sales price purposes. If we furnish the sales department with standard costs, or with standards adjusted for changes in raw material costs and current labor rates, we still have nothing better than our standard burden rate to use for the total unit cost figure. At least I have never found anyone with a satisfactory means of allocating over and under absorbed burden to individual products. It has been tried, I know, but it is usually done on the basis of some arbitrary formula of doubtful accuracy, because nothing better is available.

Now let's look for a moment at the monthly income statement. One of the problems we have here arises because the income statement is geared to sales while the under or over absorbed burden, or should we say burden variances, are developed from production. In many companies it is unusual for sales and production in any period to be at the same rate. Consequently, it is possible for the record to show high sales volume with low profits, or low sales volume with high profits. The reason would be that if, in the period of high sales there was a low production rate, there would be a big under-absorbed burden charge to increase our cost of sales. If the reverse were true, and sales were low but production high, the burden would be over-absorbed and would show up as a credit or a reduction in the cost of sales. So, you tell the boss that last month you sold $60,000 and grossed $44,000, while this month you sold $120,000 and only grossed $30,000. The boss says you are crazy and that there must be something wrong with your bookkeeping. Your reply is probably that the bookkeeping is all right—what is wrong is the way production is scheduled in relation to sales.

Right here we may be really in trouble with our production friends. Actually, it may be highly desirable to have high production in relation to low sales and low production in relation to high sales. This is one way of stabilizing employment and keeping production at a level rate, with inventory taking up the variation caused by the ups and downs of sales.

So the boss repeats that there is something wrong with the bookkeeping. Well, maybe he is right.

Do you recall that at the beginning of this argument I suggested that perhaps we should forget the distinction between factory and office and think in terms of the nature of the expenditure. Let's look at that for a minute.

We really have three kinds of expenses. First is variable—those expenses that rise and fall with the volume of production. These include material, direct labor, and some burden items, such as power consumption. Second are fixed expenses—those that remain with us at a certain amount, whether production is high or low. In assessing real estate taxes, for example, the city doesn't look at your production rate, but decides its assessment on what it considers the value of the property to be. The third class of expenses are hybrid—they are rarely fixed and they certainly do not vary with the rate of production, but they may vary because of other factors. Some of our maintenance expenses fall in this category. A certain minimum of expense is necessary at all times, and higher production may require additional expense; but doubling the production will not double the expense. Indeed, it may be that maintenance expenses will be highest with no production, because, when the equipment is down it may be the most convenient time to perform major overhauls, or, conversely, when making major overhauls the production may necessarily be stopped. So we have three kinds of expenses, but because of the irregular nature of the third class, we have to reduce our categories to two—those that vary with production and those that do not vary with production.

Now this leads us to a new definition of costs and expenses. Costs are those items that vary with production—they are direct costs—they can be measured on a unit basis with a substantial degree of accuracy—they avoid all argument as to the logic or propriety of any method of allocation. Expenses are all other expenditures, whether incurred in the factory, the office, the laboratory or in a sales district. Over-all, they are relatively fixed. They are paid whether production is high or low. They are those expenses which put us in a position to produce. They provide the buildings, the equipment and the working capital. They pay for developing the product. They provide the supervision. They produce the sales which enable us to distribute the fruits of our production and the money which keeps the whole business machine functioning.

This conception of accounting is generally termed direct cost accounting. The pioneer in this new idea was Jonathan Harris, Controller of Dewey & Almy Chemical Co. in Cambridge, Mass.

Mr. Harris is in the chemical business, so it is the nature of this particular business that presented the need for a new approach to cost thinking.

What is the effect of direct cost accounting? First, let us look at unit costs. Under this plan, the unit cost of manufacturing a product

is the same, whether you make a thousand or ten thousand. The need is eliminated of forecasting the future operating rate because that rate does not affect the cost. The entire problem of method of allocating indirect costs to products, with all of its possible misunderstandings and disagreements, is no longer with us. Many detailed calculations for each product become unnecessary, and this should contribute to a reduction in the cost of cost accounting.

Now let us look again at the income statement. Over the long cycle, there should be no significant difference in profits reported under the direct cost system as compared with the older conventional system. For the short period, such as a month, there may be substantial differences—usually lower profits in months of low sales and higher profits in months of high sales. The reason for this is obvious. Under the old system in a period of low sales, a relatively small amount of fixed burden is released from inventory and charged to cost of sales. In a period of high sales, a proportionately high amount of fixed burden is included in cost of sales. Under direct cost accounting, the same amount goes into cost of sales in both periods.

The situation can be greatly aggravated by variations in the ratio of production to sales. As mentioned earlier, in a month of high sales we could have low production. Under our old scheme, the low production results in a small amount of fixed burden going into inventory and a large amount going into cost of sales as under-absorbed burden. In a month of low sales with high production, the exact reverse would be true.

So it is possible, under our old system, to find ourselves in a month of good sales but low profits; or conversely in a month of poor sales with high profits. Direct cost accounting tends to correct this apparent paradox. At least one variable is eliminated and that is the one caused by varying ratios of production to sales.

Direct cost accounting, however, is not without its problems. Two of them that require particular attention are the valuation of inventory and establishing of sales prices.

The problem of valuation of inventory confronts us immediately when we change from the old to the new system. Obviously, because we eliminate fixed burden from cost, our new inventory value will be lower than the old. If we write this difference off, we reduce our inventory, our total current assets, our current ratio and our surplus. Perhaps that's bad; but if we adopt the philosophy that fixed burden should never have been in there anyway, and that we are correcting a long-

standing ailment by a quick surgical operation, we can, with courage and conviction, make the switch.

On the other hand, we can evade this issue, and perhaps save a lot of explaining to stockholders, by setting up in inventory a fixed amount, representing the amount of fixed burden in inventory at the time of the change. Let this amount remain in our monthly and quarterly statements, and, at the end of the year, for annual report purposes, make a calculation by some reasonable formula of the amount which should remain in inventory at that time, and make the necessary adjustments for final closing. The formula would give consideration to at least two significant factors which are; change in total inventory volume, and change in the amount actually spent for fixed burden. Even though the answer may not be an exact one, I'll venture to say that the final differences in reported profits under the old and the new system would be so small as to be entirely insignificant.

The problem of sales pricing will involve careful study and perhaps even some change in price philosophy, but this is by no means an insurmountable obstacle. We know that price is the result of many complex factors. We hear that competition sets prices. Even if we have an exclusive article that we alone supply, consideration must be given to possible substitute articles and to the amount that a customer is willing to pay to get it. Even with a monopoly, it is possible to price ourselves out of the market. Cost is only one factor to be considered, along with many others in setting a price. At this point, you will probably recall what I said at the beginning of my argument: that the one with the lowest recorded cost may tend to set the price; and you ask if it isn't true that the one with direct costs only is bound to have the lowest cost. My answer to that is that price must cover not only cost, but expenses and profit as well. The company on the conventional basis has higher costs but lower expenses. The one with direct costs has lower costs but higher expenses. So, our price is going to be established with due consideration to cost, to expenses, to competition, to substitute products, to volume desired, and perhaps other factors; and the company that can best appraise the overall combination is going to hit the price that will produce the best volume at the best profit.

One other matter should be mentioned in this direct cost picture, and that is the problem of cost control. Under our old method of shunting fixed burden in and out of inventory, it tends to be buried in final income figures, and much of its significance may be lost. In direct cost accounting, fixed burden shows up right on the top income statement as an independent figure in total amount spent for the period. Any

increase in it is immediately apparent to top management, and becomes a matter for executive attention.

This is a new development in accounting. Its acceptance is progressing slowly. So far as I know, only a few companies have adopted it. However, it is the subject of an increasing number of written articles. It is the subject of a significant new book published in London in 1947.[1] The Treasury Department in Washington in 1947 made an informal ruling that costs incurred irrespective of plant activity do not have to be included in inventory. Two Court decisions in tax cases have provided an unexpectedly strong foundation for this ruling.[2]

Direct cost accounting is not the universal answer to all our cost problems. There are undoubtedly many situations where it is not applicable. But conversely, there are many cases where it may prove useful. If your production and sales volume vary widely, if you have many products with a wide range of volumes, if your production rate is difficult to forecast, if you make many products on the same equipment or in the same department, if you have any combination of these problems, direct cost accounting may be your answer.

Personally, I am sold on it.

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[1]MARGINAL COSTING, by F .C. Lawrence and E. N. Humphreys of Paten Lawrence & Co., Manchester, England.
[2]Montreal Mining Co., 2 T.C. 688, aff'd on stipulation (CCA-6) 10/17/44; Keller-Dorian Corp., T.C. Memo Dkt. No. 3769, 6/1/45, aff'd 153 (2d) 1006.

SUCCESS

Let no feeling of discouragement prey upon you, and in the end you are sure to succeed.

—A. LINCOLN.

THE NEED FOR INTERNAL AUDITING AS A PART OF COMPTROLLERSHIP*

By W. J. McNEIL

ASSISTANT SECRETARY OF DEFENSE (COMPTROLLER)

MR. MCNEIL, who served as a Rear Admiral, Supply Corps, U. S. Naval Reserve, during World War II, was born in Boone, Iowa. He was nominated by President Truman as Assistant Secretary of Defense August 27, confirmed by the Senate September 9, and sworn into office September 12, 1949. At the same time he received his oath of office as Assistant Secretary of Defense, he also was designated Comptroller of the Department of Defense by Secretary Louis Johnson, and is continuing in the same capacity under Secretary Marshall.

Prior to joining the Office of the Secretary of Defense, Mr. McNeil had served as Administrative Assistant to the Secretary of the Navy, a position created in February, 1947, to provide for administrative continuity on a high level in the Navy Department. He was responsible for the general accounts relating to the fiscal affairs of the Naval Establishment, including the expenditure and budgeting of funds, administrative procedures, and the utilization of personnel in the Executive Office of the Secretary. In addition, he had immediate supervision over the Office of Fiscal Director, Office of Budget and Reports, Office of Management Engineer, and the Administrative office.

IT IS encouraging to see the willingness and spirit with which an increasing number of people are attacking the job of establishing better management practices in the Department of Defense. Many times in the past we have heard that the military establishment is different, but today we find that many military people and civilians who are associated with the military are increasingly enthusiastic in the firm belief that the best business practices can be adapted to the operation of the military establishment—all for the purpose of providing a more effective and efficient Defense Establishment with the same amount of substance from the taxpayers.

The work that internal auditors are engaged in is an important part of the Comptroller function. I think it should be encouraging to those of us who believe in the Comptroller concept to know that the military establishment is actually the leader in government in this field. In the last three or four years there has been a great change in the thinking of governmental agencies on comptroller type functions as rec-

*Address given at the Regional Auditors Conference, Army Audit Agency, May, 1950.

ognized by leading business organizations. I think that business in general has a great distance to go yet in applying comptroller principles to their operations. The most successful ones seem to be those who apply the advanced concept in their organizations.

Representatives of the Hoover Commission did a lot of work in this area. They felt that the lack of emphasis on comptroller functions was one of the biggest weaknesses in government. The study they made on this subject was prompted by the military departments, who assisted them in their studies and findings. Of all agencies of government the military was the only one who has gone to the Congress on their own initiative and asked that the comptroller concept be established as part of their statutory functions.

Title IV of the Unification Act recognizes the permanent importance of comptrollership in the Department of Defense.

The Comptrollers of the Department of Defense and the three military departments have been given widespread, heavy responsibilities in management fields of the respective departments, especially with respect to fiscal matters. Functions for which the Comptrollers are responsible include: preparation of budget estimates; budgetary control; fiscal, cost, and property accounting; disbursing and receiving cash; financial, statistical, and progress reporting, including analysis and interpretation of reports; management engineering services; and internal auditing.

I know there have been many questions regarding the nature and scope of internal auditing; its place in the entire organization, relation of internal auditing to the General Accounting Office audit responsibilities, and relation of auditing to the responsibilities of the Inspector General of the military department. I shall take this opportunity to make a few statements of general policy on these subjects.

It is not expected that a departmental Comptroller will have an organization under his immediate command or management control which will perform all of these functions throughout the department. Rather, it is expected that the departmental Comptroller will delegate authority for most of the actual operations in connection with performing these functions to general staff divisions, technical bureaus, other administrative offices, or military commands, each of which would have a Comptroller or fiscal officer responsible administratively to the commander of his service, but reserving solely unto himself the functions of prescribing policies and procedures and auditing of operations. In order to discharge his responsibility, the departmental Comptroller would exercise functional control (broad technical control) over all of

the operations for which he delegates responsibility. As used, functional control means the power and duty to prescribe policies and procedures, to require compliance therewith, and to review operations within the area of responsibility. Under this type of control it is appropriate for the departmental Comptroller to establish direct lines of communication throughout the department for informational purposes, although all directives or operating instructions should be issued only through established organizational channels. To this extent the Comptroller does not exercise direct control; he only assists the duly constituted authorities at every level in exercising control by providing them with information upon which intelligent operating decisions may be based.

In the exercise of functional control, the internal audit agency of the department would be a major instrument in the determination (1) that reliable budgets, reports, and other financial and statistical data are being submitted to every echelon requiring their use, and (2) that prescribed policies and procedures in the entire field of comptrollership are being complied with.

In order that the departmental internal audit agency may be adequately *independent*, the head of the agency should report directly to the Comptroller, because he must be free to criticize their work. Above all, it is essential that no portion of the audit agency's responsibilities be delegated to any command, either overseas or in the zone of the interior, because the integrity of audit requires freedom to make independent criticism in reporting to top management.

However, the audit agencies should service the Comptrollers at all echelons, including the Comptroller of the Department of Defense and the military departmental Comptroller. Audit findings should be reported through channels to all who have an interest therein, including officers in command or in other staff positions. In this manner we can avoid the use of duplicate internal audit organizations in separate echelons.

We subscribe to the modern view of the purpose of internal auditing. Internal auditing is only one of several types of internal controls maintained to serve management. Other types of internal controls include budgetary control, cost accounting and general accounting, and the system of internal checks and balances built into the organization and surrounding procedures dealing with business transactions and custody of Government funds or property. Internal auditing differs from all the other types of controls in that it functions largely as a control for measuring and evaluating the actual effectiveness in practice of other controls.

The system of internal checks and balances should be developed to the point where it will assure adequate and balanced consideration of all financial and business plans and decisions, the fidelity of all custodians of property and funds, and the integrity of all financial and business transactions within the department. As far as possible the system of internal check should be designed (1) to improve management decisions, and (2) to prevent fraud and irregularities without reliance necessarily on internal auditing. Only in case of small activities or unusual situations where it is impractical or uneconomical to establish an effective system of internal control should internal auditing be used with the old fashioned objective of detecting fraud and irregularities after they have occurred, by means of more complete or thorough examinations of transactions.

Necessarily, good auditing, for the measurement and evaluation of the effectiveness in practice of other controls requires first-hand inspection and review of operations at the source. Such auditing cannot be performed by examination of documents at a central location. While documents in support of transactions must be test-checked to meet this audit objective, it is also necessary to discuss with various responsible individuals the actual procedures and duties performed by them, and to observe the current physical performance of financial and property transactions in the light of law, regulations, and generally accepted good business practice.

While the internal audit organization would not be called upon to devise or install changes in accounting systems, it would be expected that the auditors would be qualified to, and in practice, make valuable observations and suggestions or recommendations concerning improvements in accounting systems, as well as failures in practice to conform to prescribed systems.

While it is expected that systems of internal check should be adequate to make fraud and irregularities practically impossible, we recognize that there will be occasional failure in the application of any system, due to the human element, which will result in an occasional case of fraud. Where such cases are discovered, or there is suspicion of their existence, either in connection with regular audits or otherwise, the internal audit agency would be expected to perform such investigations as necessary to establish existence of the fraud and the extent.

The field for internal auditing will not be confined to operations under appropriated funds. It will include all business and financial operations for which the department as a whole, or in any part, is responsible. Most non-appropriated funds, therefore, would be subject

to audit, as well as all civil functions, such as those of the Corps of Engineers. Furthermore, if auditing is to serve completely the needs of comptrollership in the independent review and appraisal of comptroller operations, it will necessarily be required to contribute to industrial or cost accounting, property accounting, statistics and reports, and budget preparation and budgetary control.

Some of the more enthusiastic, modern writers on the subject of internal auditing have indicated as one objective the review and appraisal of all management and administration. While this enthusiasm is to be commended, we believe that any down-to-earth view of the field must recognize limitations in the ability and capacity of auditors to review intelligently all management and operating methods and procedures. Hence, to be practical, internal auditing should not strive for the stars. And certainly, in the military departments the audit agencies should not attempt to invade the functions of the Inspector General, who is responsible for inspection of all military operations. It is important that the auditor and the Inspector General, or others who do similar work, come to a complete understanding of one another's responsibilities in order to avoid duplication of effort.

There is confusion in the minds of some regarding the relation of internal auditing to the auditing performed by the General Accounting Office.

The General Accounting Office may be considered to be an independent, outside auditor from the standpoint of the Department of Defense, in the same relative position to the department as a firm of public accountants employed by the board of directors of an industrial corporation to make an independent audit of the affairs of the corporation. Every large industrial corporation has an independent audit as well as a program of internal auditing consistent with the modern conception.

The General Accounting Office itself strongly advocates the establishment of internal auditing in each department and agency of the Federal Government. We must recognize, as does the General Accounting Office, that the primary responsibility for the protection of the Government in all business and financial transactions and in the custody of Government funds and property rests in the several departments and agencies of the Government. That responsibility cannot be discharged by reliance upon an independent post-audit. The independent post-audit must have the primary objective of ascertaining the effective discharge of basic departmental responsibilities and the reporting of deficiencies, as well as in providing the basis for an opinion to the Congress

of the fairness and reasonableness of financial and statistical information presented to the Congress by the departments and agencies. Upon this basis it is inappropriate for any one of the military departments to be influenced in any degree in the establishment of accounting systems and other types of internal control, including internal auditing, by the scope of independent auditing performed by the General Accounting Office. Rather, it is appropriate for the General Accounting Office to consider the internal controls existing within the individual military departments in establishing the scope of its auditing, including the extent of its test-checks of financial transactions.

The one phase of auditing now well developed throughout the Department of Defense is the auditing of contractors' costs under cost-reimbursement-type contracts. Yet this auditing has been inadequate from the standpoint of protection of the Department of Defense, because (1) it has not extended to post-auditing of the deals actually negotiated by contracting officers and contractors under negotiated fixed-price contracts where costs have been a factor in negotiating prices; and (2) in the Army and Air Force there has been inadequate recognition of the finality of cost determinations by cost auditors, through improperly permitting the substitution of the judgment of contracting officers for the judgment of the cost auditors on purely cost accounting matters.

From this brief outline of the proposed development of the internal audit program, we can see the importance Management is placing on this vital phase of military operations, and it is encouraging to see the interest and initiative being evidenced by the Army in the field.

QUOTABLE QUOTE

This is a time to take stock and tighten belts. We need, as never before, a well-organized, smoothly-operating muscular government. Every dollar we waste is a gift to the enemies of freedom.

—Robert L. Johnson, *national chairman, Citizens Committee for the Hoover Report.*

HOW TO DEVELOP AND WHAT TO EXPECT FROM A PUNCHED CARD INSTALLATION*

By HENRY M. HOPKINS

HUMBLE OIL & REFINING COMPANY, HOUSTON, TEXAS

Mr. Hopkins is a graduate of the University of Texas where he took a B.B.A. degree in 1931. He has been with the Humble Oil & Refining Company since 1934 where he has been working with IBM installations in the Treasury, Production Accounting and Comptroller's Department. He is at present a member of the Research and Planning Staff of the Comptroller's Department, and in this capacity designs and supervises the installation of machine accounting procedures throughout the Humble Oil organization.

BEFORE beginning any discussion of punched card methods several points must first be clarified in order that a general agreement shall be reached.

1. There is no such thing as machine accounting. With all of the chatter and clatter of machines the smallest item of accounting principles or policies has not been changed. Methods? Yes. The accounting methods have been changed, the procedures have been altered, but basically the structure of accounting is as firm as when using pen and ink transcription methods.
2. When speaking of punched card equipment there is no intention to recommend any type of machine. There are two companies that I know of that manufacture punched card machines —the Remington Rand Company and the International Business Machines Company. Although the technical aspects of the machines may vary, the operating methods differ very little, and in all probability the same type of accounting data may be recorded on either type of machine. In this discussion there will be no description of the equipment nor any explanations of operating techniques, for it would not be possible to reach a common starting point of machine knowledge.

*Presented at a meeting of the Houston Chapter.

3. There will be no justification for machine use made here. Automatic machines can perform a large amount of detail work that would be impractical under manual methods and in spite of arguments, the machines are fast, capable, and efficient aids —but *only* aids.

4. There will not even be any discussion as to the practicability of machines. It is often stated that unless the cards keypunched for an application can be used three times the installation is not practical. There may be some truth to the statement, but it would be far better to base the selection of machine equipment on a realistic method survey and analysis.

There is no set rule to determine exactly what clerical applications are practical for machine utilization, nor is there a line of demarcation by which a volume of 439 accounts is not applicable to machines, but an installation of 440 accounts is practical. About the only means of determining the practicability of machines is by comparison with existing procedures, and unless careful analysis is made the results of an expensive installation may indicate only that the previous clerical methods were adequate.

The most important factor in machine utilization is not the machines, but the human element necessary in the system. The machines are not responsible for procedures, work flow, document control, and all the myriad items which make up an accounting system. Rarely, if ever, can the machines be blamed for the failure of an application. In most cases, the systems, the procedures, the methods developed by the human element are to blame.

Quite often text books and industrial engineers mention the three M's of factory production; namely, men, machines, and materials. Lately there have been discussions on the 4 M's of management: men, machines, materials, and money. There is a fifth M which is seldom mentioned but which is as important as any of the other items—that is, methods. Whether you call them methods or procedures, the development of the "how to do it" is a large factor in office efficiency. That is why this discussion will center largely on the development of machine methods.

NECESSARY STEPS IN DEVELOPING MACHINE METHODS

Most office managers feel that the decision to use punched card equipment solves all their problems; however, they fail to consider the fact that experience and judgment are the most important elements in machine use. In developing procedures for the use of any machine,

the analysts must be guided by the capacities of the equipment and must fit the machine advantages into the new procedures. Inexperienced analysts often err in trying to follow the identical lines of the original procedures, thereby gaining only the disadvantages of the previous procedures with none of the advantages of the new machine equipment. Many people have the idea that procedures are fixed and constant under machine systems. This is far from being true since probably no more flexible accounting machine is available than the punched card type machine. Methods are so varied that many ways of performing the same operation can be developed, and the limit in most cases depends on the ability of the machine operator rather than on the mechanical operations of the equipment.

As the development of procedures is such an important element in machine use, some consideration should be given to the organization of the necessary steps in the process of installing a new machine unit. It is believed that the approach to procedure development can be taken in following six steps:

I—Evaluate the Present Method:

In reviewing procedures to determine the need for mechanical aids in clerical duties one of the primary points to be considered is the rate of efficiency reached under the existing methods. It is very easy to plan a theoretical mechanical installation operating at peak efficiency which will show savings over an inefficient manual procedure. The first problem should be to raise the efficiency of the current operations and to operate with the greatest number of short-cuts and work simplification ideas. A review of this type may indicate a need to overhaul manual procedures, or it may indicate that the employees are so inefficient and inept that a machine installation will require new personnel to make the procedures work.

The principles of any good methods study fall into three categories which, for lack of a better title, shall be labelled the 3 A's—(accumulate, arrange, analyze):

Accumulate the data: this is the fact-finding period where the methods are raked and harrowed to glean every bit of information that may be useful in later stages of the study.

Arrange the data: the facts as developed under the first step are without order or sequence, so the problem in the second step becomes one of arranging data into charts, graphs, and reports for efficient comparison.

Analyze the data: the third step depends wholly on personal judgment whereby the data that has been gathered is analyzed and a conclusion reached. It is at this point that the analyst is bound only by the capabilities of his imagination, vision, and experience.

Some of the following questions must be answered when evaluating present procedures:

(a) What is the volume of detail work?

(b) What repetitive functions occur in the processing steps?

(c) What are the cost factors?

(d) What are the personnel requirements?

(e) How do time schedules affect final reporting?

(f) Are special control reports needed that are not currently available?

(g) Are original documents satisfactory for keypunch operations?

(h) What coding methods will be required?

(i) What are the office space factors?

If conclusions are reached that the current procedures are inadequate or that the facts point toward machine characteristics because of volume, repetition, or complexity of methods, then the analyst naturally expects to design machine procedures as a logical step for comparing methods.

II—Designing Machine Procedures

It is during the step of designing procedures that knowledge becomes a very dominant factor. It is evident that very little can be accomplished except by an analyst who can utilize full advantage of the varied machine techniques and who also has a sound knowledge of the accounting system. The analyst must be an expert on current procedures by knowing what is wanted and when it is wanted; he must be a seer to anticipate what will be needed in the future; and he must be a technician to be able to supply, by machine method, all the data needed.

The designing of machine procedures can be divided generally into three component parts:

(a) Designing the card form.

(b) Designing the report forms.

(c) Developing the machine use.

Each of these parts complements the others, and all are equally important. It will be necessary to refer to the fact-gathering period to obtain the information necessary to design the cards, forms, and the procedures. But it is during the designing stage that the analyst can allow his imagination to run wild in the hope that some entirely new approach can be taken to the problem which will simplify the procedures or will provide more complete information.

Generally, the component parts of designing machine procedures can be further detailed, as follows:

A. Designing the cards:
   (a) Review original documents and final reports.
   (b) Determine what items and data should be recorded.
   (c) Determine the largest number of digits required for each item in (b).
   (d) Arrange card fields to fit the recording methods.

B. Design the forms to report machine results:
   (a) Review the clerical needs for data in primary, processing, and final stages.
   (b) Determine audit requirements.
   (c) Design forms to record processing steps.
   (d) Design forms for final reports and statistical documents.

C. Develop the machine procedures:
   (a) Determine volumes of cards, forms, etc.
   (b) Determine transcription methods and verification.
   (c) Chart machine use and work flow.
   (d) Prepare detail processing steps for individual machine use.
   (e) Prepare machine load charts and time schedules.
   (f) Note exceptions to be handled from regular routine.
   (g) Arrange type and manner of controls.

III—Forecast the Results of Machine Use

The idea in this step is to estimate the results to be expected by using machine methods and to compare the expected machine results with the results achieved under the present methods. If the previous two steps have been scrupulously held to facts and to proper estimates of machine use, the third step—that of prognostication—will be much simpler. The problem in forecasting is to refrain from using facts which are doubtful.

However, the principles of good forecasting are to determine the genuine facts and to compare those facts from an unbiased standpoint. It will first be necessary to determine facts regarding such things as costs, space, number of trained employees, time schedules, storage, etc., both as to the old methods and for the proposed procedures. It will then be possible to make comparisons between the two procedures by which a conclusion can be drawn as to the advisability of machine use.

IV—Trial Runs

The forecast which has been made may indicate that considerable advantages can be obtained from a machine installation. The next step in developing the procedures is to prepare sample trial runs to prove the adequacy of machine use and to verify the accuracy of the estimates made on volume and performance. The problem in this step is to select an adequate number of examples which will provide a good test but not so large a group as to defeat the purpose of the test by complicating it with too much detail.

Trial runs are mainly tests whereby card forms, report forms, technical machine procedures and exceptions to the general rule can be tested and proved. Speed has no place in trial runs since too much experimentation, planning, and designing complicate the runs. As with other methods, speed in machine procedures comes with training and experience.

V—Installation of Machine Procedures

After careful analysis of the present procedures, the decision is made to install the machine equipment. At that point the work is really beginning to increase, especially as the time draws near when the initial procedures will be started.

Four parts of the installation step are very important:

(a) Training.
(b) Actual installation.
(c) Coordination of inter-department use.
(d) Analyzation of the results.

It is important that a definite pre-installation training program should be devised. Training employees to understand the proposed procedures will ease the shock of methods changes and will provide the necessary foundation on which new routines can be developed. The training program should cover clerical as well as machine personnel, and the program should be comprehensive and in minute detail.

In speaking of actual installation it is meant to cover all points between the ordering of cards, forms, and machines through to the time of actually processing the first report. Careful analysis of card forms and reports must be made to provide a sufficient initial stock. However, it is advantageous to provide for a reorder shortly after commencing operations so that new procedural developments during the first few months can be corrected by the new forms.

Office layout charts must be prepared, storage anticipated for current needs and for cumulative files, power needs anticipated and proper outlets supplied, and other physical elements of the office space foreseen; and plans should be made to supply the necessary requirements.

As the first runs are made on the machines, careful policing of the procedures must be made to determine (1) that clerical employees are providing correct original documents and that the documents are coded properly, (2) that machine procedures are being followed and that proper test checks are being made, and (3) that the final results are being realized exactly as planned, and that the controls, as established, are functioning. Again it should be explained that speed comes with training and experience. The first runs will not be as fast or as perfect as later runs.

Inter-department verification of the first runs should be made to determine whether the results are in keeping with the expected coordination of data flowing from one department to another. In the final results, analysis should be made to determine the use of machines in subsequent operations performed by other divisions or departments using the same data.

VI—Follow-up

As a last step in the installation of machine methods, a review should be made after the procedures have been in effect for several months. At that time a conclusion should be drawn as to the results obtained, the efficiency of operations, and the expected points of future savings by further machine developments.

The development of machine procedures and the installation of equipment into an accounting system are hard work. One of the hardest things to combat is the thought that the machines are on trial. However, the point should be reversed, for the machines are never on trial—it is the people who plan the installation, the people who operate the machines, and the people who perform the clerical duties who are on trial. In most cases, if a correct analysis has been made, if adequate procedures are developed, and if efficient machine operations are performed, the machines will be a welcome adjunct to any clerical force.

AUDITING PRINCIPLES IN CONNECTION WITH MACHINE USE

As long as the machines are to be used by accountants, surely the auditors who are to verify the records should be completely familiar with punched card methods. Auditors will be one of the first groups to realize that the accounting department cannot make profits, but that by inefficient use of accounting machines the profits made in the operating departments can be lost. Auditors should be interested in accounting machines in order to make certain that their company, after careful analysis and trial, has selected the right machine for the job. And after the machine has been selected, the auditors should police the systems to determine that the correct routines, methods, and procedures are developed to make the most efficient use of the equipment.

Perhaps one of the most frequent expressions of dislike for punched cards has come from auditors who, without any training in machine applications, ran into a situation similar to this: When called to make an audit of a section with a new machine installation, the auditors were shown a set of general ledger totals posted from machine tabulations with no detail lists or reference data. There was no audit trail of detail transactions nor any means of preparing test checks. Because it was impossible to make a definite audit, it is no wonder that the auditors immediately proclaimed that punched card methods were not the best mechanical medium. No more erroneous statement was ever made, for there is nothing in punched card operations that will decrease the possibility of a satisfactory audit if the necessary requirements are taken into consideration when the machine methods are originated. In fact, auditors who are expert in machine methods and who are quite familiar with the internal control of their clients are now devising audit methods and test checks by using machine techniques which can be made with an economy not possible under other transcription methods. An example of this practice may be the possibility of eliminating trial balances on such special accounts as bond purchases, thrift plans, accounts receivable, pension plans, etc., whereby auditors actually perform some machine operations during a close-out period, verify other machine operations and maintain control checks. If trial balances can be eliminated or machine totals accepted, it will be possible for auditors to spend more time in verifying account distribution.

By proper coding of feature accounts and the utilization of mechanical equipment it is possible to prepare comprehensive analyses of costs that would not be feasible or practical under manual methods.

WHAT TO EXPECT FROM A MACHINE INSTALLATION

Of course we cannot list all the things that can be expected from a machine installation because each separate unit will probably have problems that are not pertinent to the work of other units. But in general terms, and discussing only those items that can be thought of at a glance, some of the following points should materialize from a machine installation:

Type of Personnel—The type of personnel in the machine installation should have the qualities of patience, imagination, affability, creative desire, and ambition. The employees should be of a higher mental type than the average office worker, because, to be a good machine operator, an employee should have technical skill in the use of the equipment and should also learn the accounting and clerical operations.

Accuracy—The primary thought in preparing all reports and statements should be accuracy; and controls should be established or clerical review performed in the degree necessary to insure accurate work. Insurance of accuracy would mean that reports were verified not only when completed, but that the operators would be expected to detect errors during the machine operation, rather than after the report is completed. Too often operators do not make use of test decks and control cards to check the mechanical accuracy of the equipment. I should like to stress the point that mechanical errors often can be charged to poor operators rather than to the machines.

Speed—The operators should be able to perform intricate patterns of machine operations with speed and dispatch. The means by which speed is effected are by training and by use of written procedures in a methods manual easily understood and easily used. In other words, the operators know the why and the wherefor of the job and have the directions outlined to move them from machine to machine with the least possible effort.

Consistency of Report Form—Each month the machine unit should prepare report forms in a standard manner and, except in extreme cases, prepare such reports on forms printed with columnar headings. This method of preparing reports is especially advantageous where procedures require a panel to be changed or modifications made to the machine setup. Quite often in such machine changes the operator places data in a sequence that may be altered slightly from the previous statement. The inconsistency of report preparation is very confusing to any one using the reports, especially

employees unfamiliar with machine operations. Reports should be changed only with the knowledge of all employees using the report.

Employee Training Program—The flexibility of punched card machines and the intricate patterns of machine operations that are sometimes necessary in accounting procedures can be performed efficiently only by employees who are highly trained and who understand the procedures. For this reason, a training program should be in continuous operation whereby employees are given instructions in the technical operations of the machines as well as training in procedures. Each of the employees should know the fundamental principles in systems design and analysis work and be sufficiently familiar with the technical operation of the machines to be able to apply machine methods to systems work.

Research—The supervisor of the tabulating unit should be striving continuously to improve the methods of machine operations. A certain portion of his time should be given to the study of new machines to determine the utilization that could be made of any new type of equipment. A large portion of the supervisor's time should be consumed in reviewing current accounting procedures and machine methods to determine whether new operating techniques could be developed that would increase the efficiency of the operation or would increase the speed at which reports could be prepared.

Professional Use of the Machines—Professional use of the machines implies that good managerial control is to be adapted to the operations of the machine unit in the same manner that good management controls are required in other clerical offices or in the factory production units. A machine unit comes closer to simulating a factory than does any of the clerical sections of the accounting office; and ideas of industrial engineering are readily applied. Four of the points for better management control can be stated here:

(a) *Work Schedule*—A work schedule should be prepared, and operations geared to the schedule to meet report deadlines and closing dates. The schedule must include the dates by which material is to be received in the machine unit from the clerical sections, processing dates, and completion dates. The schedule should be so designed that lagging processes can be detected and supervisors notified of the lag in sufficient time to remedy the delay or to plan new schedules.

(b) *Machine Load Charts*—Machine load charts should be prepared in conjunction with the work schedule to determine

whether certain machines will need to operate an impossible number of hours each day or, better still, the machine load charts should indicate periods of machine inactivity whereby schedules could be rearranged to eliminate peak periods.

(c) *Efficient Machine Utilization*—Time records should be maintained both on machines and operators, with a careful analysis made of past performance in order to determine the degree of efficiency effected by each operator or to review the processing time so that inefficient procedures can be located, studied, and new methods developed to attain greater machine efficiency.

(d) *Quality Control*—The supervisor should establish statistical control over the quality of work turned out by the employees to determine the amount of verification necessary. If it is possible to eliminate 80 percent of the verification work and still maintain a degree of accuracy which is satisfactory, the installation costs could be decreased considerably.

Idle Time—Idle time for the machines occurs during certain periods of the month. Of course, this should be held to the minimum; but, generally speaking, unless there is some idle time in an accounting system, you can expect pyramiding of reports. Just because data are punched in the cards is sufficient reason, from the viewpoint of some office managers, for compiling statistical reports of little or no usefulness. Because of idle time in the machine unit, a report which is better adapted to other processing methods can be prepared by punched card methods; but this means that before very long the work schedules will be cluttered with less profitable operations.

These are only a few of the general points, and it is certain that others can be brought to light. The principal thing to remember is that you can expect from the machine unit exactly what you put into it. Machine units are like any office unit—the type of training, the type of systems, and the type of supervision determine the benefits that are to be realized.

While excellent benefits are to be derived from the use of mechanical aids it should be realized that the machines operate only as well as the methods assigned. Operations we can't perform are probably being done easily by someone else. We can't remain static in our accounting methods; we must be ever looking for something better. Similarly, we can't remain static in the use of machines. Study, training, and the use of new types of machines will increase the individual production of each clerk.

PERPETUAL INVENTORY CONTROL—A REALITY*

By VAL WILLIAMS, Auditor

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AN IDEA which is consistently gaining prominence in the solution of industry problems is the one embodied in a quotation from the late Justice Holmes, as follows: "At this time, we need education in the *obvious*, more than investigation of the obscure." This phrase illustrates most dramatically the approach we have used in the solution of our inventory control problem. The plan itself is simple, but successful operation requires continuous education.

In 1946, a series of meetings were held in our company to consider the multitude of problems which confronted industry generally as a result of the transition from wartime operations to a competitive peacetime economy. High costs, excessively high inventories, complicated and involved procedures, poor customer service, lowered production output, and the like, were problems not unique to our company. They were, however, our problems, and survival demanded that we solve them to the best of our ability.

Our company's sales had dropped from a peak of fifty-million dollar wartime volume to a probable twenty-five million dollar peacetime operation. We were not dealing with one customer any more but with hundreds of them. We had acquired tremendous overstocks and were still buying at a very accelerated rate. While we had all available storage spaces loaded to the rafters, still we were short on many items. Our control records were not keeping pace with the actual transactions. Naturally, taking physical inventory under such conditions was a long

*Paper given at a meeting of the Indianapolis Chapter.

and exceedingly expensive process. We were forced to stop most of our operations for a period of two weeks in order to count some twenty thousand items.

The treasurer of our company was given the responsibility for solving the entire inventory problem. He developed a four-point objective:

(1) Reduce the inventory to the proper requirement level without dumping it in the river;

(2) Establish a control to insure adequate stocks to meet production requirements;

(3) Reduce the time required to take the annual inventory; and

(4) Do all this without any expense to the company.

The task of accomplishing this objective became a joint responsibility of the treasurer and the Internal Auditing Department. We were aware that any effective control of inventory, whether from the standpoint of quantities required for production, or total investment or minimum risk, must be based on accurate up-to-the-minute knowledge as to the actual quantities on hand. If we were to overcome the difficulties of high obsolescence and unbalanced quantities, we must have a system which would give us this answer.

A survey and analysis was made of our existing methods of control to determine the exact function and potential of each one. The conclusions reached were as follows:

(1) The material control records in use in each division served the primary function of assigning, ordering and scheduling, but were too far removed from the actual stock transactions to serve further as an accurate control of physical quantities;

(2) The people posting these records were not also moving and handling material. This divided responsibility made control ineffective;

(3) Of the twenty thousand items to be controlled there were few, if any, key items which could also control other items; and

(4) An attempt to control physical stocks by a centrally-located, punched-card tabulating method would be too unwieldy and too far removed from the actual materials.

The study then concerned itself with the storage areas themselves and the personnel in them.

We discovered among other things that the men in the storerooms were not busy all of the time. While they definitely had periods of peak loads in receiving and disbursing materials, they also had long periods of relative inactivity. We further found a desire on their part to have control records of their own as a means of making their jobs more complete. While this study indicated that perhaps here was the very simple, old fashioned answer to our problem of perpetual control, there were very definite obstacles to be considered.

Because of the nature of our products, our inventory was made up of huge quantities of low cost items. Of many inventory parts we carry as many as two to three million pieces, as normal quantity. While we had only twenty thousand part numbers, we were dealing with many million individual pieces.

These obstacles to placing the control records inside the storerooms were considered: (1) Could men of the caliber ordinarily employed in storerooms be expected to maintain neat, accurate records? (2) Could we prevent the usual rapid turnover of storeroom help caused by seniority rules? (3) Could we insure that all materials would pass through controlled storeroom areas without disrupting production planning? (4) How could we assure ourselves, as well as the public accountants, that such records were reliable at all times? (When the thought was first advanced to our public accounting firm, they felt that as an internal control tool, the plan would be fine. However, they were very skeptical as to their acceptance of perpetual records as a substitute for the time-honored practice of weights and counts at inventory time.) (5) How much work would be required at the annual inventory time?

We recognized that these difficulties were serious but we decided that, if we were to accomplish the four-point objective we had set ourselves, we would have to gamble on making the plan work.

Our first move was to select the storeroom where we knew we had the best available storekeeper and establish a visible-card control record. We made sure that the physical layout of the storage area was so marked that we could assign location information on each card. The materials were counted item by item and the starting balances established. The control record was kept in a central location in the storeroom and part number identification tags were placed on all bin sections. Good housekeeping practices were established. Forward and reserve stock planning was started. The storekeeper was schooled in the process of posting and adding receipts and posting and deducting issues. He was required to record the new balance quantity on each copy of a receipt or disburse-

ment report and forward a copy of that paper to the material control section. We also indicated maximum and minimum quantities on the storekeeper's cards, for standard items, so that he may assist material control personnel in the event they overlook an order point. He was further given a supply of inventory spotcheck sheets, and required to conduct a continuous count of the items under his control. This spotcheck was worked out on the following formula:

Assume that he has 1,200 items, and that he is required to count all items once each year. This means 100 items per month, 25 items per week, 5 items per day. At the end of each week these count sheets are submitted to the Internal Auditing Departmnt where the dollar values are calculated. A "percentage or frequency of error" as well as a "loss and gain factor" is also computed. We compute the "percentage or frequency of error" by taking the total of the plus and minus differences between the balances shown on the bin cards and the actual counts and dividing this sum into the total actual count. The "loss and gain factor" is determined by taking the difference between the plus counts value and the minus counts value and then dividing this difference by the total value of the parts counted. This "loss and gain factor" is especially important since the unit value of parts carried in the storeroom varies so widely. If the results, over a period of time, were less than 3% for "percentage or frequency of error" and less than 1.5% for "loss and gain factor," the records are considered to be acceptable. The Internal Audit Department checks these count sheets submitted by the storekeeper and, in addition, conducts independent counts of its own. The public accounting firm also makes periodic checks to test the accuracy of the system. Any major variations from the minimum standards of performance are immediately investigated to determine the cause. When the cause is known an adjustment is made and, where necessary, the system is changed.

As this experiment developed, the system was gradually extended to the other twenty storage areas. In some instances, the personnel was not able to maintain accurate records and had to be replaced. However, by the end of 1947, we had gained enough experience and confidence in our system to accept record balances in lieu of a complete physical count for approximately one-half of our storerooms. The 1948 inventory was taken from the card records in all but one storeroom. We took the 1949 inventory completely from the records at the end of October, and every one connected with the auditing and checking at that time concurred in the statement that it was the most amazingly accurate inventory they had witnessed. The spotchecks made at that time, which

covered 10% or more of the items, indicated an over-all variation of less than 1%.

No system of this type could long be successful, in our opinion, without constant vigilance such as is maintained in our company by the Internal Audit Department. Two men from this group are assigned the responsibility of continuously checking all storage areas. In addition to verifying records and balances, they review the usage of all items to determine the "slow movers" and the "short stocks." Our management is now utilizing this knowledge by requiring all requests for materials and parts to bear the approval of the Internal Audit Department before purchase orders are placed. The purpose of this procedure is to assist in maintaining an adequate supply for production requirements, but at the same time, to prevent overstocks and unbalanced inventories.

At the time of our annual inventory we organize inventory crews and audit crews. Every one who is to have anything to do with this operation is thoroughly instructed before he may take part. As soon as the work is completed, we all meet and discuss suggestions for improving our procedures. The actual listing is done during a weekend and, last year, required less than 1½ days to complete in every detail except pricing. We are sure now that the 1950 inventory will require less than one day's time.

Our management is convinced that this method has saved $50,000 a year in inventory costs and lost production alone.

At any time during the year when the count of a particular part indicates a large dollar variation, we make an adjustment in our ledgers. Inventory adjustments at year-ends are very small.

Since this system has been in operation, we have been able to reduce our total inventory investment by 80%, even though our sales volume has increased. This has come about, by and large, because we have finger-tip knowledge about the quantities actually on hand. We are able to combine quick analysis of slow-moving items and short stock situations, with the checks made by the Internal Auditors. A clean, workable inventory is a by-product.

A word of caution should be added here. While the program is simple and certainly not new, its very simplicity can be a grave danger. The key to the entire plan is a good competent storekeeper who takes equal pride in the physical appearance of his storeroom and in the accuracy of his records. We have attempted to foster this pride by recog-

nizing, publicly, those instances where good progress has been made. If there has been a really serious threat to the success of our program, it is the threat of frequent personnel changes in these jobs. We feel, however, that the added dignity and meaning given to their positions has done more to stabilize turnover than any other single factor. Any interference with the established routine of moving materials must be discouraged. Management generally must be wholeheartedly in sympathy with the program and lend its support to the successful operation of it.

This plan may not be the best for perpetual inventory control, but it works well for us. Our public accountants have been extremely helpful in suggesting revisions and refinements and have become enthusiastic over its success. Without their wholehearted assistance this program would not have been possible.

DO YOU KNOW

The greatest secret of production—is saving waste?

The greatest mistake—is to resist change?

The greatest hazard toward progressive thinking—is prejudice?

The greatest comfort—is the knowledge that you are doing your job well?

The greatest play—is your work?

The greatest man—is the one who always does what he knows is right?

The greatest field for success—is probably right where you are?

—*The Bulletin.*

MAINTENANCE OF INTERNAL CONTROLS*

By EARLE H. CUNNINGHAM

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INTRODUCTION

INTERNAL CONTROL has always been an important factor to successful management, but there has never been a time in the history of business when it has received the attention and emphasis that it does today.

More has been written on the subject of business controls, during the past ten years than in any previous period; a clear indication of a growing consciousness of its importance.

GROWING NEED FOR CONTROLS

The social and economic problems that have developed during the past ten or twelve years have been of such monumental importance that they have consumed the greater part of top management's time. As a result, top executives have been obliged to delegate more and more of their normal operating and administrative duties to others for execution.

The administrative problems of our larger companies are becoming so numerous and complex that top management can do little more

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than formulate policies and procedures and review and interpret reports on operation. Even in our smaller companies, management is finding it necessary to delegate more and more of its responsibilities to subordinates for execution. And department heads and supervisors are finding it increasingly difficult to keep fully informed on the many details for which they are responsible; and these responsibilities have increased many-fold during the past ten or fifteen years. Top management is obliged to give more of its time to strategy and delegate the tactics to lower levels.

The administration of a business is becoming more and more a problem of operating by remote control. And while this condition prevails to a greater extent in some companies than in others, it exists to some extent in all companies. To bridge this gap between the nerve centers of management and line operations and to compensate for absentee supervision, it has been necessary to expand and refine existing controls and to develop many new controls.

In the early days of business when controls were comparatively few and simple, their maintenance was no great problem. But today, our systems of internal control are a labyrinth of measures developed and refined to keep pace with a fast changing business economy.

The expansion and increasing importance of internal controls have multiplied the need for a higher degree of maintenance.

I have seen many cases where considerable time, effort and money was expended to produce adequate controls, but once created and translated into manual form, they soon became the "forgotten man" of management procedures. Controls deteriorate and become obsolete just as much as physical properties, and maintenance is as essential as it is in the case of machinery and equipment. Preservation of controls is a must to good business housekeeping.

To properly maintain a system of internal control requires constant policing to insure the maximum effectiveness. Paraphrasing John Curran in his speech upon the Right of Election, "Eternal vigilance is the price of quality controls."

While those charged with the responsibility for originating and operating the controls have the prime responsibility for their proper maintenance, experience has proved that frequently they are so near to the picture or so absorbed in other responsibilities, that they do not readily detect imperfections and other matters that may need consideration.

It is for these reasons that internal auditing, which has no assigned operating duties, is best fitted to assume the responsibility for maintaining a continuous survey and evaluation of internal controls.

Inspection of management functions, clerical routines and operating activities is just as essential as inspection on the production line.

One of the most important problems which every executive must meet and solve, and it is a continuing problem, is that of coordination and control of the functions for which he is responsible, whether he be the head of a small department or the president of the company.

INTERNAL CONTROL vs. INTERNAL CHECK

It may be well at this time to clarify the term "Internal Control," and make sure that we have a common understanding of what it comprehends.

No one should confuse "Internal Control" with "Internal Check." These two terms have been used so loosely, and so many times synonymously, that one cannot be sure just what the speaker or writer has in mind when he uses them.

Internal Check comprehends those procedures and organization of duties designed to lessen the opportunity for undetected fraud or error; whereas, *Internal Control* comprehends those procedures and organization of duties designed to promote efficiency, by restraining inefficiency. To be a little more specific, *Internal Control* in its broadest sense comprehends the entire system of procedures, methods, organization of duties, and other measures by which Management—

(1) Keeps informed on the state of the business;

(2) Effects coordination of functions;

(3) Maintains faithful and efficient performance;

(4) Assures itself that objectives are being satisfactorily accomplished; and

(5) That the business is being operated in strict conformance with its policies and plans.

In contrast, *Internal Check* is a phase of Internal Control that comprehends the separation of the duties of employees, charged with the custody or administration of company values, or the record keeping relating thereto, so that no one person has absolute and independent control. The procedures and routines are so laid out that the work of one

person complements that of another. Internal Check is merely a segment or one of the cogs in the overall system of Internal Control. The term Internal Control is synonymous with Managerial Control.

TYPES OF INTERNAL CONTROL

In a large company you may find an overall system of managerial control that is further supported by subsidiary systems developed within functional areas.

The type and number of individual controls making up the over-all system will vary with the size and nature of the business and the requirements of management. Some of the more common controls are—

(1) Supervision
(2) General Accounting
(3) Cost Accounting
(4) Internal Check
(5) Internal Auditing
(6) Budgetary Control
(7) Procedure Manuals
(8) Many others of a similar nature.

Each type of control has its own important part to play, in the general scheme of management; and the most of them interlock with the pattern of operations to such an extent that they become an integral part of it.

Internal Auditing like Internal Check is one of the several controls making up the over-all system; but it does not interlock and become an integral part of any operating function. It is more in the nature of a maintenance or inspection control, and is used largely for the purpose of measuring and evaluating the adequacy and effectiveness of other controls.

INTERNAL AUDITING — DEFINED

Internal Auditing has changed its complexion materially over the last ten years and unless one has kept pace with this change he is not likely to fully understand its present utility and how it operates in the larger and more progressive companies. Originally, it was merely a policing agency maintained for;

(1) Detection and prevention of errors.
(2) Detection and prevention of fraud.

While modern internal auditing still retains its protective functions, its primary objective is to render constructive services and to keep management posted on the state of the business by bringing to attention any material facts that might not otherwise receive consideration.

INTERNAL AUDITING—CLERICAL vs. PROFESSIONAL

In considering Internal Auditing it is important that one understands the difference between—

(1) Clerical Internal Auditing, and

(2) Professional or Managerial Internal Auditing.

There are many activities in a business that require double checking, proving, verifying, etc. The function of making these proofs and checks is frequently referred to as Internal Auditing, though in reality it is nothing more than a clerical routine; a type of policing for the detection of fraud and errors. Clerical internal auditing deals largely with routine matters and is seldom charged with the responsibility of surveying and evaluating problems lying in the Management field. The clerical type of auditor expends the greater part of his effort on verifications, while the professional or managerial type of auditor is more concerned with appraisals or evaluations.

It is the broadened area of responsibility and the special type of constructive services required from the Managerial Internal Auditor that has distinguished his type of practice and given him professional recognition.

INTERNAL AUDITING—ORGANIZATIONAL TYPES

The duties and responsibilities of the contemporary internal auditor vary according to his organizational type, of which there are four—

(1) Proprietary

(2) Management

(3) Staff

(4) Department

The first three—Proprietary, Management and Staff—are generally considered as of Managerial or Professional standard while Department internal auditing is viewed as a Clerical type or nonprofessional.

PROPRIETARY INTERNAL AUDITING

Proprietary internal auditing is the highest level of internal auditing. This is so, because the internal auditor is a direct representative of

the proprietor or owner of the business. The auditor is appointed by and reports to the owner and he is completely independent of all other management personnel. His scope of activities is generally very broad and he is highly concerned with operating and management functions and their effectiveness. This type of internal auditing is not so common as some of the other types; and is employed principally in large business enterprises with absentee ownership and impersonal management.

MANAGEMENT INTERNAL AUDITING

The more common type of internal auditing is the management type. In this case the internal auditor is a representative of administrative management, and he may be instructed to report to the President, the Executive Vice-President, the Administrative or Executive Committee or other management authority of a similar level.

STAFF INTERNAL AUDITING

The staff internal auditor is one appointed by a staff head. The auditor works primarily for and under the direction of the staff head and the scope of his activity is generally limited to the staff head's area of responsibility. Generally any staff head has the authority to create an internal auditor to serve within the limits of his responsibility. A good example of this type is an internal auditor created to serve the staff head in charge of accounting. This staff head may be given the title of Comptroller, Treasurer, Secretary or some similar title.

An internal auditor serving in this capacity would, in most cases, be limited in the scope of his activities to the accounting and financial records. When the Comptroller or Treasurer is a member of administrative management, as well as a staff head, the auditor may be granted authority to operate at the management level, but report to the Comptroller or Treasurer for administrative purposes. Such a procedure increases the worth of internal auditing to the company as a whole.

DEPARTMENT INTERNAL AUDITING

Department internal auditing, which is the lowest level, is created by authority of a department head to function within the department head's area of responsibility. Examples of this type would be:

(1) Disbursement Auditor

(2) Accounts Payable Auditor

(3) Pay Roll Auditor

(4) Construction Auditor

(5) Branch Auditor

(6) Others of a similar nature.

INTERNAL AUDIT vs. INTERNAL CHECK

One must carefully distinguish between those activities that are truly of an auditing nature and those activities that are merely a part of the system of "internal check." We must make a clear distinction between "Internal Check" and "Internal Audit." "Internal Check" is a control designed to function as an integral part of the accounting system while "Internal Audit" is a type of control created to function independently of accounting routines and procedures.

While it is the responsibility of Internal Audit to determine the adequacy and effectiveness of Internal Check it should never duplicate an objective that is already adequately served by Internal Check.

To the extent that a system of internal check is satisfactory to the auditor, he should only test and sample the transactions controlled by it, to prove his appraisal was sound. Concentrated internal auditing should pick up where internal check leaves off, or be intensively applied at those points where internal check may appear to be weak.

AUDITOR'S AUTHORITY AND INDEPENDENCE

Independence is basic and essential to the effectiveness of internal auditing. The organizational status of the internal auditor and the support accorded him are major determinants of the range and value of his services. He should be made responsible to an officer of sufficient rank in the organization as will assure adequate consideration and action on his findings and recommendations.

Though the auditor may be set up to report to a member of top management, his services should be available to all levels of management, including department heads, supervision and others charged with management responsibilities.

It should be understood, however, that Internal Auditing is in no sense a managing, supervising or directing agency. The auditor never issues orders, instructions or directives; nor does he have authority over any personnel outside of his own staff. His function is limited to that of inspection, survey, review, observation, evaluation, drawing conclusions, and reporting his opinions, findings, suggestions and recommendations for the benefit of operating and administrative management; it is this latter group that initiates remedial action. The internal auditor is a diagnostician but not a doctor or surgeon. He may, however, write prescrip-

tions when circumstances require, but these are generally in the nature of suggestions or recommendations, rather than directives.

Because the management type of internal auditing encompasses a much wider field of review and appraisal than the clerical type and because of its enlarged responsibilities to management, the auditor is frequently charged with trying to run the business.

The Internal Auditor truly worthy of this designation will never assume an attitude that will merit such an accusation. Internal Auditing is merely a staff or advisory function and possesses no operating or administrative authority. It is strictly a service agency.

Once the personnel of a company clearly understands the true functions of internal auditing, and benefits to be gained by cooperative effort, the auditor soon becomes a welcome guest.

MEANING OF MANAGEMENT

There is an old saying:

"An Institution is but the lengthened shadow of one man." This might have been true in the early pioneering days of business, but it is far from being a general truth today. It is the team work displayed by each and every administrative employee, right down to the lowest level of supervision that determines the degree of success that a business enjoys.

So when we currently speak of "Management" we no longer think in terms of "top brass" but vision the entire administrative personnel of a company.

It is true that we have several levels of management but no one can truthfully say one level is any more important to the business than the other, or that one level necessarily has made a greater contribution than another.

For convenience of classification we group the administrative employees of a company as:

(1) Top management

(2) Middle management

(3) Line management

It takes the combined effort of these three groups and of the individuals making up the separate groups, working in complete harmony and coordination to attain highly effective management. To accomplish

this their respective duties and responsibilities must be clearly defined and understood; not in terms of generalities but in specific and precise detail.

FUNCTIONAL ORGANIZATION

Administrative personnel work with greater interest and more effectively when objectives are crystal clear; and when the methods for obtaining those objectives are similarly portrayed.

The first thing for members of the management family to understand is the relationship of the various functional areas; the relationship of the various sections within a functional area; and their own specific duties and responsibilities.

To facilitate this understanding the company organization should be expressed in chart form and annotated to the extent necessary to prevent any misunderstanding as to just where each employee fits into the over-all pattern.

These organizational and functional charts should be given wide distribution within the company, so that all personnel, including clerical employees, may have an opportunity to become thoroughly familiar with the working relationship of every business activity.

Organizational and functional charts properly developed and clearly presented to the company's personnel are the first step in the maintenance of Internal Control.

POLICIES AND PROCEDURES

Next in importance to the charts, that I have just mentioned, is the development of policies and procedures by which the organization is to function. No matter how well an organization may be formed, it will not operate smoothly and effectively without well-defined policies and procedures; and they must not only be well defined but well understood.

A great many policies and procedures that develop through conferences and by precedent never find their way into written form. As a consequence we have misunderstandings, misinterpretations, weak application, wrong application and frequently no application.

Since policies and procedures are a part of the system of Internal Control they should be reduced to written form and in such a manner that they are always available for reference and study by administrative and operating employees.

Fixed or unchanging policies and procedures, and those subject only to infrequent changes can be presented in manual form. Those of a current or temporary nature and which are generally issued in the form of letters, circulars or similar medium, should be controlled by some kind of numbering system and preserved in a readily accessible manner.

OPERATING MANUALS AND FLOW-CHARTS

It has been my experience that the best way to present organizational and functional charts, and policies and procedures is by the use of manuals.

Operating and administrative manuals embodying charts of functional relationship, flow-charts outlining the route of the various transactions, and detailed instruction dealing with policies and procedures provide an excellent means for maintaining internal control.

Staff and department operating manuals may be supplemented by "Desk Manuals" which treat solely with the functions of a specific job and provide each employee with detailed specifications of his own responsibilities.

Manuals, if properly prepared, provide:

(1) A blue-print that will enable each employee to determine with preciseness his area of activity and responsibility;

(2) A road-map that will facilitate and accelerate the orientation of new employees;

(3) A yardstick by which to measure the effectiveness of work performed;

(4) And a base or standard by which the auditor may determine the degree to which management's objectives have been accomplished.

NEED FOR GROUP CONFERENCES

As I have previously indicated, a company, a staff, a department, a section or other business unit or activity, is no longer the "shadow of one man" but the shadow of team effort.

To get the fullest degree of team effort, means that every last man on the team must be fully informed on the rules of the game.

For this reason, I suggest that frequent group conferences be scheduled for the purpose of reviewing functional relationships, policies and procedures, and other operating and administrative plans; to measure and evaluate them in the light of current conditions; to ferret out

any needs for modification and additions; to keep the personnel well informed on performances, problems and objectives; and ever conscious of the importance of their individual duties and responsibilities.

Conferences properly organized and conducted stimulate thinking and interest in the work and objectives of the group; and also provide an unexcelled training medium.

IMPROVING THE HUMAN FACTOR OF CONTROL

In the past the stress for improvement of Internal Controls has been placed largely on the physical and material phases.

Office machines and other equipment have been developed to take over much of the work formerly performed by hand, and because of automatic control features, these new inventions have gone a long way in strengthening and improving the over-all system of controls.

Until quite recently, the human element has been more or less taken for granted, and little effort has been expended to improve this factor as a means to better internal control.

Today most of the larger companies maintain employee training programs in one form or another; some are operated at the department level and others on a company wide basis. But, even when a company wide program is in effect, it does not, in my opinion, obviate the need for training at the department level. It might eliminate the need for certain basic and fundamental training, but specialized training tailored to fit the requirements of a particular department, generally can be accomplished better at the department level.

Training programs, department conferences, round-table discussions and other activities of this nature all contribute to developing and refining internal control factors as affected by the human element.

BALANCED CONTROL

Controls created and expanded beyond a real and practical need, result in unnecessary costs and are likely to prove a hindrance to smooth operations.

Likewise, inadequate controls—controls which only partially satisfy the need—or adequate controls ineffectively operated or poorly maintained, will also result in losses of one kind or another.

In between the extremes of inadequate and excessive controls is a reasonable and practical balance that should be meticulously maintained. Controls should not be created solely on a theoretical or idealistic

basis. To do so might result in cumbersome and expensive controls that would outweigh the benefits obtained.

This is particularly true in respect to internal check. The cost of maintaining an ideal system of internal check should be weighed against the calculated risk. Should the cost exceed or nearly approach the amount of the calculated risk, it might be more desirable to waive or modify the internal check, and turn the responsibility over to internal audit. It is one of the duties of internal audit to pick up where internal check leaves off; but only to the extent that internal check is impracticable of application.

FROM THE HOOVER COMMISSION REPORT

Federal accounting, virtually unchanged since the days of Alexander Hamilton, has long beclouded and slowed down the business operations of the whole government. The Commission found the federal establishment keeping four sets of books under procedures so cumbersome that some agencies had to wait more than a year to get the financial "score." For example, the law required that agencies all over the country ship vouchers to Washington in car load lots to be separately scrutinized by 10,000 employees in the Comptroller General's office. In any well-run modern business, a simple "spot check" would do.

—The Citizens Committee for Reorganization of the Executive Branch of the Government.

THE FAIR LABOR STANDARDS ACT OF 1949—ITS EFFECT ON BUSINESS*

By A. B. HUGHES

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MR. A. B. HUGHES joined the Monsanto Chemical Company in 1943 as Assistant to the Director of Payrolls and Pensions. In July he became Director, at which time he also became Secretary of the Monsanto Pension Committee. Mr. Hughes has taken an active part in all matters pertaining to labor laws, retirement plans and related themes, and regularly attends meetings of the Industrial Conference Board in New York City when subjects in his field are discussed.

Born and raised in Ohio, he attended the School of Business and Administration of Oberlin College, Oberlin, Ohio. Prior to his connection with Monsanto he was the Regional Office Manager of the General Food Sales Company, Inc., with headquarters at Detroit.

CONGRESS passed this new law to solve the host of problems that plagued employers and employees under the original Wage-Hour Law, but already many of the so-called experts have leveled the charge that the new law creates more problems than it solves. It is safe to say that the United States Supreme Court will get the task of interpreting each of the many new terms used in the law.

It took Congress eleven years to give employers and employees a new Wage-Hour Law, but the general overhauling of the Fair Labor Standards Act, completed by the 81st Congress, left few of the provisions of the original law intact. Like the original Wage-Hour Act adopted in 1938, the 1949 amendments represent a compromise. Labor has constantly sought a "modernized" law with higher standards, while employers wanted a simpler, less embracing law; and it is now apparent that neither group attained its objectives. The original Act was adopted against the background of a long and severe business depression. It had three principle objectives:

1. To establish a floor under wages in order to prevent a complete wage collapse in the event of another depression.

*Presented before the St. Louis Chapter of THE INSTITUTE.

2. It sought to encourage the spreading of available work among more employees by requiring a premium or penalty rate for work above a weekly maximum number of hours.
3. It sought to restrict the employment of "oppressive child labor" in establishments producing goods for commerce.

That the provisions of this law were numerous and complex is common knowledge to all of us, but they were subordinate to these three objectives. It outlined coverage and exemption provisions and gave certain rules for determining those employees entitled to the minimum wage and overtime benefits.

Despite the length and detailed nature of the provisions, the experiences of employers and employees soon indicated that there were several serious gaps in the scheme of regulation. Specifically they were:

1. The absence of any definition of working time for which an employer was obligated to account to his employees in minimum wages and overtime pay.
2. The lack of any formula or guides for figuring the "regular rate" on which an employee's weekly overtime pay must be based.
3. The omission of specific definitions of many of the key terms used in the coverage and exemption provisions.
4. The failure to include a direct prohibition of the employment of "oppressive child labor" in establishments subject to the child labor provisions.

The problems resulting from these gaps, plus the usual demands for exceptions and special treatment under a regulatory law, led to the introduction of proposals for amendent in every Congress since the law was adopted. It was nearly ten years, however, before a change of any consequence was enacted.

The 1938 coverage was broad, but did not reach the outer limits of the Congressional power over commerce. Its exemptions were many and complex. Its overtime provisions spawned the "portal-to-portal" and "overtime-on-overtime" suits with claims involving such enormous liabilities that Congress felt it necessary to nullify them retroactively.

The adoption of the over-all amendments followed a long and spirited struggle between Administration supporters and a strong coalition of Republicans and Southern Democrats. So evenly matched were the opposing groups that at one point the Administration appeared ready

to abandon all proposals except that for an increase in the minimum wage. Eventually, it was able to salvage some of its other aims by making concessions on coverage and exemption changes to the coalition. A conference agreement was reached on October 14th, 1949, and was presented to both the House and the Senate on October 17th ending with their approval October 18th. President Truman affixed his signature to the measure on October 26, 1949. This fixed the effective date of all amendments as of January 25, 1950, with the exception of the provision increasing the Wage-Hour Administrator's salary, which became effective immediately.

All the foregoing leads to the fact that the amended law has been with us since January 25th, and strict compliance is essential for employers and employees covered.

Naturally all of us are interested primarily in what effect all this will have on us, on the businesses with which we are associated and whether or not all the predictions we have read will actually materialize. At this point I feel it should be stressed that it cannot be stated with a great degree of accuracy just how far-reaching the effects of the new law may be.

Briefly the new Wage-Hour Law boosts the minimum wage 87½% from a minimum of 40¢ to 75¢ an hour. A new concept of coverage of employees is introduced. "Regular rate of pay" is partially defined. The Wage-Hour Administrator is given the unprecedented power to sue for employees' unpaid wages. Child labor restrictions are stiffened. Exemptions are revolutionized. A multitude of other changes are also made.

To better understand the effects of each of these revisions, let me point out some of the conclusions voiced by experts in this field.

The minimum wage under the Wage-Hour Act had not presented any serious problems for most employers for several years, but this has no longer been the case since January 25th, 1950. Beginning with that date the minimum became 75¢ an hour, and it is reasonable to assume that this could mean higher payroll costs both for the employers of the 21 million workers covered by the law, who were getting at least 75¢ an hour, and the employers of the 1½ million workers covered by the law who were getting less than 75¢ an hour. It can be expected that unions will be bent on maintaining wage differentials not only within a single plant but also between low and high-wage industries, so this could develop into a trend of wage increases for those workers already paid more than 75¢ an hour. Good personnel policy calls for pay in-

creases among the higher bracketed workers when the lower bracketed workers get increases. Since wage rates form a pattern growing out of relative productivity, skill, experience, responsibility and the like, differentials created by these factors should be maintained in the interest of both efficiency and employee relations.

By this time the industries you represent have made wage adjustments wherever needed to comply with the minimum figure. Some of you may have found it necessary to raise salaries of certain supervisory employees where their rates are pegged at a percentage over the wage rates of the workers under them. If numerous rate adjustments were made, prices of your products as well as those of your suppliers may reflect additional costs. You may have found that replanning of work schedules could eliminate overtime, thereby offsetting, to a certain degree, the rise in wage costs. To meet such increases you may already have found it expedient to promote greater efficiency in the selection and use of labor, also by savings on fringe benefits or overhead costs.

The new law made sweeping changes in the coverage of employees by using language that laid down new tests for determining coverage. However, certain employees, who would otherwise be covered, are specifically exempt by the law. These special exemptions will be mentioned later as a part of this discussion.

Employees are covered who are engaged in interstate commerce or production of goods for interstate commerce or any closely related process or occupation directly essential to the production. Under the old law's definition of "produced," employees were covered who were "necessary to the production" of goods in addition to employees directly engaged in producing goods. The new law strikes out the phrase "necessary to the production" and substitutes the phrase "closely related process or occupation directly essential to the production" of goods. "Commerce" is redefined. The new law strikes out the phrase "from any state to any place outside" and substitutes the phrase "Between any state and any place outside," so that the definition covers incoming foreign commerce.

It is reasonably certain that the minimum wage and overtime requirements will apply to few employees. The new language of the law rejects a definition that was just becoming settled after 10 years of experience and hundreds of court decisions. The experts assert that it may take another ten years to litigate the new language and determine just where the line is drawn in coverage.

When we speak of employees *not* covered under the law because of the fact that their activities are not closely related or directly essential to production, it is best explained by one or two examples illustrating the point. Employees of a local architectural firm, whose activities include the preparation of plans for the alteration of buildings within the state that are used to produce goods for interstate commerce, *are not covered.* Employees of a merchant, selling his goods locally to customers who produce goods for interstate commerce but do not use the merchant's goods as a part or ingredient of the goods they produce, *are not covered.*

On the other hand the following examples illustrate groups of employees covered because their activities *are* closely related or directly essential to production. One example would be maintenance, custodial and clerical employees of manufacturers, mining companies and other producers of goods for interstate commerce. Another example would be the employees of public utilities furnishing gas, electricity or water to firms within the state that manufacture, produce or mine goods for interstate commerce.

It is obvious that many firms are in a position to determine coverage with little difficulty, but there are many types of business and industry where the subject demands very careful consideration.

The term "regular rate of pay" has led to so much confusion since the troublesome "overtime-on-overtime" period that Congress, in the amended law, has attempted to define it. There will still be endless cases requiring interpretation, but at any rate we do have something to guide us.

There is, of course, no change in the requirement that employees covered must be given overtime pay for all hours worked in excess of 40 hours a week at the rate of time and one-half their regular rates of pay.

In arriving at the regular rate of pay, two factors are vital:

First, we must know how many hours the employees work in the workweek; and

Second, we must determine what is included in wages.

After the hours worked and the wages are known, the computation of regular rate of pay can be made.

As to the first factor, there is no limit on the number of hours an employee can work a week as long as he is paid time and one-half for each hour worked over 40 a week. There is no provision in the new

law permitting an employee, because of an emergency, to work over 40 hours a week without overtime pay.

Under the Portal Act, time spent walking, riding or traveling to and from the place of performance of an employee's principal activities or in preliminary or postliminary activities is not considered hours worked. In addition to the Portal Act provision, the new law adds that time spent changing clothes and washing up at the beginning and end of the working day may be excluded from hours worked if so provided by a collective bargaining contract.

Under the new law an employee's regular rate of pay includes all remuneration received by him for employment except the following:

1. Gifts.
2. Bonuses.
3. Payments from profit-sharing or thrift plans.
4. Pay for unworked time.
5. Traveling expenses and other non-wage payments.
6. Talent fees.
7. Contributions to pension and health plans.
8. Daily or weekly overtime.
9. Premiums for work on Saturdays, Sundays, holidays, regular day of rest or sixth or seventh day.
10. Premiums for work outside regular workday or workweek.

All of these payments can be excluded from an employee's regular rate *but* only the last three:

(8) Daily or weekly overtime.

(9) Premiums for work on Saturdays, Sundays, holidays, regular day of rest or sixth or seventh days.

(10) Premiums for work outside regular workday or workweek. can be offset against overtime due under the law.

Some of these items can be tricky. Incentive bonuses, production bonuses and the like still count as wages since they are paid by agreement or promise, and the employer has no discretion in giving them to eligible workers. Incidentally, employers who cannot meet these requirements can still avoid having to recompute overtime. A bonus based on a percentage of an employee's total pay (straight-time plus overtime) does not increase his regular rate of pay.

I have purposely made this point because industry can lay itself open to the law unless individual circumstances, procedures, etc. are analyzed.

It is interesting to note that the new law repeals and reenacts the provisions of the Overtime-on-Overtime Law and makes it retroactive to claims arising prior to July 20, 1949.

Under the original Act, suits for back wages could be brought only by employees. Under the amended Act the employee still has the right to bring his own suit for unpaid wages plus an amount equal to the unpaid wages as liquidated damages. However, the Administrator now has the power to supervise the payment of back wages owed to employees and has the right to sue for these wages on behalf of the employee if any employer does not make payment. Once an employer has offered to pay wages the Administrator finds to be due, and the employee accepts payment, the employee waives his right, under the law, to sue for liquidated damages. It is important to note that the Administrator cannot bring a wage suit in any case involving an issue of law not settled finally by the courts. The Portal Act's two-year limit on wages suits applies to suits brought by the Administrator to recover unpaid wages for employees.

Because of the fact that Belo-Type Plans and Annual Wage-Employment Arrangements are not here of general interest, I have purposely omitted a lengthy discussion. The new law, however, expressly authorizes the Belo-Type Plans but they are limited in scope. The overtime exemption for employees working under Guaranteed Annual Employment Plans is liberalized.

As I stated before, the child-labor provisions of the law have been tightened. While many of the businesses or industries you represent may have experienced no difficulty along these lines, there are certain sections of the country where child-labor in business and industry has created some real problems.

Formerly the law prohibited shipment in interstate commerce of goods produced in an establishment using oppressive child-labor within 30 days before removal of goods. It is apparent that there was a loophole because employers using oppressive child-labor to produce goods had only to hold the goods for 30 days before shipment. As amended, the law now directly prohibits the employment of "oppressive child-labor" in interstate commerce or the production of goods for interstate commerce. The new law also closes up a loophole under the former definition that permitted a minor under 16 to work for his parents or guardian

in hazardous occupations, although the same work was prohibited for minors between 16 and 18. There is an exemption for child-labor in agriculture limited to hours outside of school hours for the district where the child is living. In addition, the exemption for children in motion pictures and theatrical productions has been extended to radio and television productions.

In December 1949, the Administrator issued the new tests for determining white-collar exemptions. As you know, executive, administrative, professional, outside salesmen and local retailing employees are completely exempt from Wage-Hour overtime pay. *But* (it seems every law carries this word) these employees qualify for exemption *only* if they meet *all* the tests laid down by the new regulations.

Incorrect classification of these employees can mean severe penalties, but on the other hand, failure to take advantage of the exemptions for qualified employees means unnecessarily high payroll costs.

Perhaps some of the firms you represent have already found they had employees who met all the work qualifications but not the salary minimum. If the differential was not too great, you may have found it to your advantage to bring the salary to the required figure. These increases, of course, would bear a relationship to your established pay-increase policy and your customary differentials. Slight changes in duties often may be the means of effecting an exemption qualification.

In this connection a restudy of work assignments should be made to eliminate overtime operations wherever possible. Where overtime hours are involved for employees considered nonexempt, the law permits several plans which may have merit. There is the Irregular Workweek Plan, the Belo-Type Plan, the Long Workweek Plan and the Time-Off Plan. Investigation may help in saving in overtime costs and at the same time comply with the law.

Easy-to-read White-Collar Exemption Charts have been issued from several sources and show at a glance the salary requirements, amount of nonexempt work permitted, duties considered exempt, authority to hire and fire employees, etc. Exceptions are also clearly shown.

As an example, to qualify for the "Executive" exemption:

1. Salary must be at least $238.33 monthly.
2. Work not directly and closely related to his exempt executive duties cannot exceed 20% of *own* hours work in workweek.
3. Primary duty is to manage the enterprise or department or department subdivision.

4. Directs work of at least two other workers.
5. Has authority to hire and fire or his recommendations carry weight.
6. Uses discretionary powers.

As mentioned, there are exceptions:

1. Those employees on a salary basis of at least $433.33 monthly whose primary work is to manage the enterprise or department or department subdivision including the direction of at least two other workers *are exempt.*
2. The 20% limit does not apply to employee in sole charge of plant or physically separated branch, or who owns at least 20% interest in the enterprise.

Similar tests are available for administrative, professional, outside salesmen and local retailing employees. However, they are different in each case. (See Exemptions Chart on page 90.)

Since the effective date of this law has already passed, it is to be assumed that all of us are now complying as closely as it is humanly possible, but there is always the possibility that something may have been overlooked.

I certainly hope that this discourse, which consists in many parts of my personal opinions and interpretations, may have clarified some of the points with which you may not have been familiar.

WHITE-COLLAR EXEMPTIONS CHART

	Pay and Non-Exempt Work	*Other Qualifications*	*Exceptions*
EXECUTIVE	1. Salary of at least $55 a week exclusive of board, lodging or other facilities. Payment of $110 bi-weekly, or $119.17 semi-monthly, or $238.33 monthly is permissible. 2. Work not directly and closely related to his exempt executive duties cannot exceed 20% of own hours worked in workweek.	*All* conditions must be met: 1. Primary duty is to manage the enterprise or department or department subdivision; *and* 2. Directs work of at least two other workers; *and* 3. Has authority to hire and fire or his recommendations carry weight; *and* 4. Uses discretionary powers.	1. Employees on salary basis of at least $100 a week whose primary work is to manage the enterprise or department, or department subdivision, including the direction of at least two other workers, *are exempt*. 2. The 20% limit does not apply to employee in sole charge of plant or physically separated branch, or who owns at least 20% interest in the enterprise.
ADMINISTRATIVE	1. Salary or fees of at least $75 a week exclusive of board, lodging or other facilities. Payment of $150 bi-weekly, or $162.50 semi-monthly, or $325 monthly is permissible. 2. Work not directly and closely related to his exempt administrative duties cannot exceed 20% of *own* hours worked in workweek.	*All* conditions must be met: 1. Primary duty is office or nonmanual field work directly related to management policies or general business operations of employer or employer's customers; *and* 2. Uses discretion and judgment; *and* 3. (A) Directly assists owner or executive or administrative employee, *or* (B) Performs under general supervision specialized or technical work requiring special training, experience or knowledge, *or* (C) Executes under general supervision special assignments.	1. Employees on salary or fee basis of at least $100 a week whose primary work is office or nonmanual field work directly related to management policies or general business operations of employer or employer's customers and requires use of discretion and judgment, *are exempt*.
PROFESSIONAL	1. Salary or fees of at least $75 a week exclusive of board, lodging or other facilities. Payment of $150 bi-weekly, or $162.50 semi-monthly, or $325 monthly is permissible. 2. Work not essential part of and necessarily incident to his exempt professional duties cannot exceed 20% of *own* hours worked in workweek.	*All* conditions must be met: 1. Primary duty (A) requires advanced knowledge customarily acquired by specialized study, *or* (B) Is original and creative in artistic field and result depends on invention, imagination or talent; *and* 3. Work is intellectual, varied; result not standardized.	1. Employees on salary or fee basis of at least $100 a week whose primary work *either* requires advanced knowledge and use of discretion and judgment *or* is in artistic field and requires invention, imagination or talent, *are exempt*. 2. No minimum salary requirement in law and medicine for certificate or license holders actually practicing.
RETAILING	1. No salary requirement. 2. Work other than making retail sales or immediately incidental work cannot exceed 20% of hours worked in workweek by nonexempt employees.	Employee makes retail sales of goods or services of which more than 50% of dollar volume is made within the state or does work immediately incidental to making of these sales.	None.
SALESMAN	1. No salary requirement. 2. Work other than making outside sales or obtaining orders or contracts for services or facilities cannot exceed 20% of hours worked in workweek by non-exempt employees.	Employee engaged away from employer's place of business in making sales or obtaining orders or contracts for services or for use of facilities for which client or customer will pay.	Work incidental to employee's own outside sales or solicitations, including incidental deliveries and collections, is not nonexempt work.

ARTICLES OF INTEREST
TO INTERNAL AUDITORS

BRUNO VOLLPRECHT, Assistant Editor, directs attention to the following Articles of Interest

Subject: **How the U. S. Air Force Audits Supplier's Accounts on Procurement Contracts.**

By: **BRIG. GEN. T. R. RAMPY, Auditor General, U.S.A.F.**

Published in The Journal of Accountancy, October, 1950.

In this article, Brig. Gen. Rampy, Auditor General under the Deputy Chief of Staff, Comptroller, United States Air Force presents a timely orientation on the auditing activities of one branch of the military, the Air Force; he sets forth the responsibilities of his office, what laws establish the audit requirements, and the nature of audit personnel used. As the procurement activity of the Air Force increases from day to day, auditing phases of a supplier's accounts on procurement contracts likewise increase and become of increasing importance. At the outset, the General describes the two main functions of his office: one, procurement, the auditing of which is his major concern in this paper; and two, internal audit of military and related establishments.

To understand fully the procurement activity the author lists with a brief explanation of audit requirements the following types of contracts presently in use.

1. The standard fixed-price contract.
2. Negotiated fixed-price contracts.
3. Negotiated fixed-price contracts with provision for redetermination of the price at some stated point during production.
4. Cost reimbursement type contracts with or without a fixed fee.

Continuing his discussion of cost-type contracts, the author states that agreement has been reached as to what exactly is to determine costs under procurement contracts. All three services got together with representatives from industry and have promulgated a set of cost rules. Also, in process now, is the establishing of a new audit manual for uniform use, and further streamlining of the audit program.

The General then outlines the organizational set-up of his office, together with field auditors' methods and procedures of reporting. Geographical regions have been established, and regional chiefs report to the Auditor General.

Lastly, the author comments on the relationship between the audit division of the Air Force and the Audit Division of the General Accounting Office. The function of the G.A.O. is analagous to that of a public accountant who reports directly to the Board of Directors. The G.A.O. is an agency of Congress and reports to it on the financial activities of the Air Force and other departments of the Government.

In conclusion, General Rampy cites the need for cooperation between the Air Force auditor and the contractor under cost-type contracts. By working together effectively and efficiently the chances of later reports of back-charges will be avoided.

Subject: Big Business and Small Business: A Case Study

By: ROBERT SCHLAIFER, Assistant Professor of Business Administration at the Harvard Business School.

Published in the Harvard Business Review, July, 1950.

Mr. Schlaifer's contention is that in the current controversy over "bigness" in industry, the factors of technological innovation and product improvement are deserving of some attention and consideration. With this in mind, he sets out to prove by studying the experience of the aircraft engine industry that both big and small industry has definite and separate functions to perform. In the particular industry studied, small firms have been the source of radical product innovation while the large firms have been responsible for final development and originating further innovations of detail.

In his research, Prof. Schlaifer has subjected to careful examination (1) the development of the air-cooled type of aircraft engine in the U.S.; and (2) the successful development of the turbojet engine in Great Britain. In both instances it can be shown that it was a new firm which was responsible for initiating the development. Here in the U.S., the Lawrance Aero Engine Corporation developed the 200 h.p. aero-engine; in Great Britain, Power Jets Ltd. did the same for the turbojet engine. Why the new firm rather than established leaders in the industry should be responsible for initiating these developments can be seen in the circumstances surrounding these two developments.

Proceeding with his discussion, Mr. Schlaifer shows exactly when and how the big firm steps in to carry out the full development and commercialization of the innovation. It is in the final development of the product wherein the small firm fails. The full development of a product is an expensive process, the cost of which only the large firm can absorb; the experimental stage of demonstrating the practicability of a new idea is not so expensive, and for this reason alone, the small firm will probably remain the source of new ideas in product innovation.

Accompanying the final development of the product is the continual improvement made in the detail of the product; and it is this phase which can be best carried out by a big firm because of its resources and abilities. In short, the big firm has the technological "know-how".

In conclusion, Prof. Schlaifer sums up the lessons learned from his study of the aircraft engine industry with respect to the roles of small and big business. Where the small firm has introduced an innovation and demonstrated its practicability, readying it for the market can be done most economically by the big firm. More important, such a transfer often paves the way for technological progress.

Subject: The Management Audit Comes of Age.

By: ARTHUR P. WILSON, A Professional Management Engineer.

Published in the Controller, September 1950.

In a paper recently presented at a meeting of the Springfield Control of the Controllers' Institute of America, Mr. Wilson, who has had wide experience in professional management engineering, offers his concept of the management audit, a relatively new but important development in modern business. Even more important reasons are set forth why management should be interested in this type of audit. Analogous to the accounting audit in many respects—both entail processes of review—the objective of the management audit is to

look for ways to improve business operations so as to effect better results.

At the outset, Mr. Wilson defines the management audit as a constructive examination of a company's policies, of its organization structure, of its operating methods and of its utilization of human and physical facilities with the purpose of finding means to improvement. It is the author's contention that much is to be gained by such an examination; not only does it serve as a check by top management on itself but the owners can check on management.

The author lists numerous examples of the results of various management audits, all of which illustrate how constructive and beneficial the management audit can be. The examples cited further illustrate the breadth of the scope of the management audit.

Continuing his discussion, Mr. Wilson delves into the questions of how the audit is made, who should make the audit, and when the audit should be made. His answers thereto are very cogent, and they clarify the role of the independent management consulting engineer.

In his conclusion, the author construes the management audit as a tool of business management which can serve management well in its adjustment to current changing conditions. Ever mindful of the increasing tempo of business today, Mr. Wilson believes that the management audit can become a valuable adjunct to modern business management.

Subject: **Increasing the Effectiveness of the Independent Auditor.**

By: **JAMES E. TURNER, Vice President-Treasurer of Talon, Inc., Meadville, Pa.**

Published in The Controller, August 1950.

In his introductory remarks, Mr. Turner states that when a firm's books are audited, the occasion gives rise to a disruption of the regular work of the controller's division plus the attendant inconveniences upon the client's staff. Since many controllers graduated from the field of public accounting, they realize that if the employees of their staffs have been put to any inconvenience by the independent auditors, it was necessary in order to obtain information. In most companies, the co-operation existing between the client and the independent auditor is not very real, and does not go farther than the client answering the questions put to him by the independent auditor. It is the author's contention that the co-operation between the two can and should be more positive. If the auditor and the client work together effectively, especially in the advance planning stage of the audit, not only will the inconveniences be reduced but financial savings will result.

In coordinating the activity of the independent auditor with that of the client the author recommends the following:

1. The company should tie-in its year-end closing schedules with the audit program of the public accountant.
2. The independent auditor should furnish the company with a list of reports which the auditor will require as part of his working papers.
3. While the company should develop its own program for the taking of physical inventory, the procedures should be reviewed with the public accountant prior to the inventory date.
4. Copies of accounting procedures existent in the company should be submitted to the independent auditor for review.

5. Copies of reports issuing from the company's own internal audit department showing the results of periodic routine audits likewise should be provided for the auditors. These reports will indicate to the independent auditor whether company policy is being strictly adhered to.

Mr. Turner states that, in his own company, which pursues such a program, tangible results give evidence to the soundness of the program. A reduction in overtime put in by both the public accountant and the company's accounting organization and an earlier closing have been effected. Financial savings in the form of reduced audit fees have resulted.

In conclusion, the author points up the fact that any program for coordinating the activities of the public accountants and the company's own accounting organization must be formulated on a company basis. The program will vary from year to year and between companies.

Subject: Accounting—A Mid-Century Appraisal.

By: JOHN A. BECKETT, Assistant Professor of Accounting, Massachusetts Institute of Technology.

Published in the N.A.C.A. Bulletin, Section 1, September 1950.

In this thought-provoking article, Prof. Beckett presents a kaleidoscopic picture of the growth of accounting, the progress made, and the goals still to be achieved. The development of accounting theory and technique has been considerable. Now, at the mid-century point it is well and wise to take stock.

For purposes of this essay, Prof. Beckett breaks down our knowledge of accounting into four groups; each group summarizes functionally the work the accountant does. It is through this approach, and by examining the significance of each group, that the author establishes his appraisal. These functions of accounting are as follows:

1. Measuring profit and promoting financial control.
2. Planning future activities, most often in the form of budgeting.
3. Assisting in the control of current activities, a process in which variance analyses under standard costs are a principal tool.
4. Guiding managerial decisions as to courses of action for the future.

Under the heading of profit measurement, Prof. Beckett traces the evolution of accounting from its earliest roots of simple record-keeping to our modern concept of measuring profit. Even today, concepts of profits vary, and are not often crystal clear. Complexities arise in determination of costs, valuation of inventories, and report of earnings with the possible effect of changed dollar values. Another challenge is the accounting for costs—and profits—under pension programs.

A further development in accounting has been budgeting and its contribution to planning. It is an easy transition from a body of static knowledge about a business becoming a guide in deciding future courses of action. Because of the accountant's knowledge of historical things concerning the business, he can help in projecting the future.

Commensurate with the growth of scientific management, there has come a demand for the accountant's participation in active planning. His function is to develop tools of measurement of operations. Here,

the problem of cost control affords a challenge; the thoery of cost control itself is not often carried out in practice, and its objective is often lost sight of. In fact, this function of accounting, i.e., providing cost data for managerial use, is still a controversial matter.

In this comprehensive paper, Prof. Beckett has brought to a head, in an interesting manner, some of the challenging aspects of accounting. His appraisal of our vast body of accounting knowledge is timely and of vital interest to all members of the profession.

Subject: Contemporary Practices in Costing Inventories

By: WALTER B. McFARLAND, PhD., Member of National Headquarters Staff of the National Association of Cost Accountants.

Published in The New York Certified Public Accountant, June 1950.

In a paper presented at a recent technical meeting of the Society sponsored by the Committee on Cost Accounting and Inventory Methods, Dr. McFarland, who has done extensive research in the cost accounting field, is concerned with the problem of *costing* inventories rather than with *pricing* inventories. More specifically, the author deals with the question of what is included or excluded from cost for inventory purposes. This aspect of costing inventories—the allocation of costs and charges—has not received as much attention as the more widely discussed problem of whether to use Fifo, Lifo, etc.

At the outset, Dr. McFarland sets forth the objectives in costing inventories; the types of costs which are included in inventories, a basis for classification of costs, and lastly, the accounting procedure. His classification is two fold; product costs or period costs, each determined at time of origin.

The dividing line between manufacturing and non-manufacturing costs, the author contends, is not always easy to define. To illustrate. the author cites such borderline items as packaging, storaging of finished goods, expenditures for research and development, and administrative salaries. In stressing this point, Dr. McFarland gives some interesting conclusions on the diversity in cost classification and the reasons underlying the practice, drawn from a study made by the N. A. C. A. Committee on Research, of which he is a member.

Other cost accounting aspects of goods remaining on hand, at the close of an accounting period, dealt with by the author, are as follows: accounting for inventories under standard costs, treatment of price variances, performance standards and overhead standards. In his discussion of each of the above, Dr. McFarland incorporates the findings of his study pertinent to the subject.

Lastly, Dr. McFarland renders some interesting comments on the cost of goods which have been sold. Here, the tendency in practice is to include, in the cost of goods sold, charges which have no relationship to the cost of manufacturing the goods.

In this comprehensive paper, Dr. McFarland contributes factual information to our knowledge of inventory costing. While he is concerned with only one phase, allocation of costs, what he has to say should be of great interest and of value to both accountants and auditors; and most revealing are the results of his findings pertinent to the subject under discussion.

Subject: Internship Training Programs.

By: DAVID W. THOMPSON, Indiana University.

Published in the Accounting Review, October 1950.

While internship training in accounting is not a recent development, the author believes that the full potentialities of such a program have not been fully realized; it is hoped that by reviewing the administration of internship training its effective use as a training device will be recognized by both the school and industry, in addition to its great value to the student.

At the outset, Mr. Thompson lists the advantages of internship training which are bound to accrue to each of the three parties concerned. The trainee obtains practical experience in accounting. For the employees, internship training can be regarded as a method of recruiting new employees. While for the school, internship training programs provide a proving ground for testing the student's performance on the job.

The author contends that there are no real disadvantages associated with a properly administered training program. When the school authorities and representatives from the company have planned and carefully worked out the details of the program, no difficulties are encountered. Furthermore, a more careful selection of trainees by the school has ironed out some of the difficulties encountered in the past.

In this cooperation between the employer and the school in establishing an internship program, Mr. Thompson suggests that both parties be ever-mindful of the following:

1. Training objective: The purpose of the training should be decided in advance. List in detail the things the intern should learn during the internship.

2. Program: Schedule the actual work experience or clerical jobs the intern should perform in order to attain the training objective.

3. Supervision: The employer and the school should jointly supervise the program to see that the schedule established is being followed and that the student is being trained in the areas chosen. Many internship programs are not effective because of the lack of supervision.

4. Follow-through: After the internship program has been completed, tests should be made to evaluate the results to see how closely the established objectives were attained. By means of this testing, improvements can be made in future programs.

Continuing his discussion, the author describes a program for industrial internship in accounting which was administered by the University in cooperation with the Delco-Remy Division of General Motors Corporation. Training objectives and work assignments, together with reports, are clearly outlined.

Mr. Thompson has clearly stated the case for internship training programs. He has summed up the advantages of internship to the student, to the cooperating business organization, and to the school. Since internship training programs in industrial accounting have become more common, this article should be of great interest to all supervisors of accounting and auditing departments.

Subject: Audits by Certified Public Accountants.

Published by The American Institute of Accountants.

This pamphlet prepared by the research department of the American Institute of Accountants is a re-statement of the nature and significance of audits made by certified public accountants. Its main purpose is to help and assist others—executives, bankers, teachers, etc.—to gain a more complete understanding of the auditor's responsibilities and of audit procedures. Lastly, it is intended to correct some of the misunderstandings which have arisen concerning the exactitude of financial statements and the responsibilities of C.P.A.s in reporting upon them.

The contents are divided into five sections: financial statements, the C.P.A. report, auditing philosophy, auditing procedures and a summary. In each section features of the auditor's work are discussed in relation to the subject matter.

A noteworthy feature of this booklet is the appendix, containing a list of publications pertinent to auditing, published by the American Institute of Accountants. This list should be of great help to anyone who wishes to do further reading on auditing subjects of special appeal or interest

(56 pages—Price $.50)

To have a better understanding of our fellow men, let us try to put ourselves in their place and we will be able to figure out why they act as they do.

—*Chinese Proverb.*

No matter whether it be a river or a little brook, flowing water always maintains a level, similar to a man who does not have to be governed by rules.

—CONFUCIUS.

MEMBERS' FORUM

ON THE USE OF PHOTOGRAPHS

One of the procedural instructions to the Internal Audit Department by the Audit Committee of our Company is: "The auditor should use a camera to illustrate by the use of photographs the quality of maintenance of plant or office, the maintenance of inventory as well as other conditions which are better indicated by photographs than by written text in a report."

Photographs are used liberally in the audit reports to provide a visual portrayal of conditions described in the text. Subjects include the condition and method of storing goods in warehouses, evidence of neglected maintenance, unsafe working conditions and plant hazards, unsatisfactory housekeeping, defective equipment, defective products and many others. Exceptionally good conditions and recent improvements are also described and illustrated, with suggestions for adopting them at other locations.

—D. L. GREAVES.

A REMINDER

The publication of The Internal Auditor is not a one-way street. As is the entire work of THE INSTITUTE, it is a co-operative venture to which every member of THE INSTITUTE should contribute. Each one of us should ask ourselves whether we could not submit an article to The Internal Auditor, because our publication needs our material. The Editorial Staff cannot pick articles out of the air. Neither can it write on all the experiences and theories representative of our profession, because such articles must come from every type of business and from every part of the country.

Besides the benefit to the membership-at-large of experiences and thoughts on internal auditing, it need scarcely be said that the individual who contributes an article stands to gain much thereby. It improves his writing style and technique, of no small importance to an internal auditor, and enhances his personal prestige.

The Internal Auditor needs material; every member of THE INSTITUTE should do his part.

—A. J. E. CHILD.

YOUR EDITOR SPEAKS:

The first issue of THE INSTITUTE's Quarterly was published in September, 1944. Edward J. Barr, of Detroit, was the Editor and was ably joined by Alan Lauckner (President 1944-45) who handled the many problems which centered in New York. This arrangement was in effect until the September, 1945 issue was published, when Victor Brink consented to act as Editor.

Victor Brink edited the December, 1945 issue; but, because of his numerous, pressing obligations (concerning which most of us who know him well have wondered how he consistently met them), asked to be relieved of the Editorship.

Briefly, I was then nominated; and, feeling a great sense of obligation toward furthering, insofar as it was within my power, the progress and prestige of THE INSTITUTE, I arranged my business and personal affairs in March, 1946 to the end that I could carry on the Editorship as an extra activity.

However, I want here to emphasize the fact that, understandably, our Quarterly can be only as good as THE INSTITUTE's contributing members make it, with the somewhat limited assistance given by others who have something to say auditorily. And, if the Quarterly has gained acceptance, it is primarily due to those contributors whose effective efforts have not only achieved publication but have been, I feel certain, appreciated by our readers.

As to my job, I unreservedly say that it was capped by the continuously expert support given me by the Editorial Committee, Messrs. Max A. Kenyon, Edward J. Novotney and, until recently, John F. Brady (whom Bruno Vollprecht succeeded.)

But, now, after five years of service, I am retiring with this December, 1950 issue.

With the March, 1951 issue, Max Kenyon will ably take over the Editorship; I say "ably," since I know he will top the job I gave THE INSTITUTE by many high degrees.

I add: May our INSTITUTE grow in prestige and, with the aid of the Quarterly, make a yet greater impression on the world of business.

Sincerely — cordially,

CHARLES J. FUE.

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State of Connecticut, } ss.
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Before me, a Notary Public in and for the State and County aforesaid, personally appeared JEROME H. WALLSTON, who, having been duly sworn according to law, deposes and says that he is the Business Manager of The Internal Auditor and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, as amended by the acts of March 3, 1933, and July 2, 1946 (section 537, Postal Laws and Regulations):

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, The Institute of Internal Auditors, Inc., New York, N. Y.; Editor, Charles J. Fue, Brooklyn, N. Y.; Business manager, Jerome H. Wallston, Stamford, Conn.

2. That the owner is: The Institute of Internal Auditors, Inc., 120 Wall Street, New York 5, N. Y., a membership corporation.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: None.

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JEROME H. WALLSTON, Business Mgr.

Sworn to and subscribed before me this 26th day of Feb., 1947.

BEATRICE CODY
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Ronald Press—15 East 26th Street—New York 10, N. Y.

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